GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Labour Factories Boilers & Insurance Medical Services Department - RULES - The Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No. 37 of 2020) - The Occupational Safety, Health and Working Conditions (Andhra Pradesh) Rules, 2022 - Preliminary Notification - Orders - Issued.

LABOUR FACTORIES BOILERS & INSURANCE MEDICAL SERVICES (LABOUR-II) DEPARTMENT

G.O.Rt.No.205 **Dated:13.06.2022**

Read the following:-

1. The Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No. 37 of 2020) notified by the Ministry of Labour & Employment, GOI, New Delhi in Gazette No.62, dt: 29.09.2020.
2. From the Special Commissioner of Labour, Andhra Pradesh, Vijayawada, Lr.No.C/Labour Codes /2020, Dated:19.O4.2021.
3. From the Director of Factories, Andhra Pradesh, Vijayawada, Lr.No.LAE05-12021(31)/2/2021-DIR-DOF, Dt:11.05.2021.

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ORDER:-

The Ministry of Labour & Employment, Government of India, New Delhi has notified the Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No. 37 of 2020), an Act to amend and consolidate the laws relating to the Occupational Safety, Health and Working Conditions of the persons employed in an establishment and for matters connected therewith or incidental thereto vide Gazette in the first read above.

2. The Special Commissioner of Labour, Andhra Pradesh, Vijayawada and , in the second read above, has furnished the draft State rules on the Occupational Safety, Health and Working Conditions (Andhra Pradesh) Rules, 2022 under the Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No. 37 of 2020) with a request to issue notification calling for objections and suggestions from general public and stakeholders in the matter.

3. Government, after careful examination of the matter, hereby decided to issue draft rules namely the Occupational Safety, Health and Working Conditions (Andhra Pradesh) Rules, 2022, which the State Government proposes to make, in exercise of the powers conferred under sections 133 and 135 of the Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No.37 of 2020) read with section 24 of the General Clauses Act, 1987 (Central Act No.10 of 1987) by inviting objections and suggestions from general public and stakeholders in the matter.

4. Accordingly, the following notification shall be published in an extraordinary issue of Andhra Pradesh Gazette.

PRELIMINARY NOTIFICATION

The following draft rules, which the State Government proposes to make in exercise of the powers under sections 133 and 135 of the Occupational Safety, Health and Working Conditions Code, 2020 (Central Act No.37 of 2020) read with section 24 of the General Clauses Act, 1987 (Central Act No.10 of 1987) and in supersession of the rules made by the State Government in exercise of the powers conferred by the Contract Labour (Regulation and Abolition) Act, 1970 (Central Act No.37 of 1970), the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 (Central Act No.30 of 1979), the Beedi and Cigar Workers (Conditions of Employment) Act, 1966 (Central Act No.32 of 1966), the Factories Act, 1948 (Central Act No. 63 of 1948), the Plantation Labour Act, 1951 (Central Act No. 69 of 1951), the Working Journalists and other Newspaper Employees (Conditions of Service) and Miscellaneous Provisions Act, 1955 (Central Act No.45 of 1955), the Working Journalists (Fixation of Rates of Wages) Act, 1958 (Central Act No.29 of 1958), the Motor Transport Workers Act, 1961 (Central Act No.27 of 1961), the Sales Promotion Employees (Conditions of Services) Act, 1976 (Central Act No. 11 of 1976), the Cine-Workers and Cinema Theatre Workers (Regulation of Employment) Act, 1981 (Central Act No. 50 of 1981), the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 (Central Act No.27 of 1996), the Mines Act, 1952 (Central Act No.35 of 1952), the Dock Workers (Safety, Health and Welfare) Act, 1986 (Central Act No.54 of 1986) as the case may be which are repealed by section 143 of the Occupational Safety Health and Working Conditions Code, 2020 (Central Act No.37 of 2020) except as respects things done or omitted to be done before such supersession, are hereby notified as required by section 137 for information of all persons likely to be affected thereby and the notice is hereby given that the said draft notification will be taken into consideration after the expiry of a period of forty-five days from the date on which the copies of the Official Gazette in which this notification is published are made available to the public:

2. The objections and suggestions, if any, should be addressed to the Special Commissioner of Labour, Andhra Pradesh, Vijayawada through the mail address:splcol.labour@gmail.com.

3. Objections and suggestions, which may be received from any person with respect to the said draft notification before expiry of the period specified above, will be considered by the State Government.

OCCUPATIONAL SAFETY, HEALTH AND WORKING CONDITIONS (ANDHRA PRADESH) RULES, 2022

CHAPTER - I

PRELIMINARY

1. **Short title, extent and commencement:** These rules may be called the Occupational Safety, Health and Working Conditions (Andhra Pradesh) Rules, 2022.

(1)They extend to whole State of Andhra Pradesh.

(2)They shall come into force on the date of their final publication in the Official Gazette.

2. Definitions

(1) In these rules, unless the context otherwise requires,-

(a)"Appeal" means an appeal preferred under sub-section (1) of section 4

(b) "Appellate officer" means the appellant officer appointed by the Government under subsection (1) of section 4 and section 75.

(c) "Board" means the Andhra Pradesh occupational safety and health advisory board constituted by the State Government under sub-section (1) of section 17.

(d) "Code" means the Occupational Safety, Health and Working Conditions Code, 2020;

(e) "Committees" mean committees appointed by the Andhra Pradesh state Government under sub-section (3) of section 17.

(f) "District Magistrate": includes the Additional District Magistrate and any other officer appointed by the Government in that behalf

(g) "Form" means a form annexed to these rules;

(h) "Government "means the Government of Andhra Pradesh.

(i) "Health Surveillance Officer" means a qualified medical practitioner, who shall possess any recognised medical qualification as defined in the National Medical Commission Act, 2019 (30 OF 2019) and who is enrolled on a Indian Medical Register as defined in clause (e) and on a State Medical Register as defined in clause (l) of section 35, 36, 37 and 40 of the Act and possess a certificate of Training in Industrial Health of minimum three months duration recognized by the State Government, employed by the occupier for the purpose carrying on the medical surveillance of the employees/workers employed in the prescribed operations/process in the factory or part of the factory.

(j) "Inspector-cum-facilitator" means a person appointed by the state Government by notification under the sub-section (1) of section 34.

(k) "Licensing Authority" means authority appointed by the state Government by notification under the sub-section (1) of Section 119 and Section 74.

(l) Local Authority: - means the Commissioner in the case of an area within the limits of a municipality or corporation, the executive officer in the case of an area within the jurisdiction of a panchayat and the president of a district board in the case of any other area.

(m)Maintained: - means maintained in an efficient state, in efficient working order and in good repair

(n) "Member" means a member of the Board and includes its chairperson.

(o) "Power" means electrical energy, or any other form of energy which is

mechanically transmitted and is not generated by human or animal agency;

(p) "Qualified Person" means a person designated by the employer who by his experience and knowledge of necessary precautions against risks of danger or hazard, is fit to undertake such work;

(q) "Registering Officer" means the registering officer appointed by the Government under sub-section (2) of section 3.

(r) "Responsible person": means a person employed in the establishment who is, by virtue of his position in the establishment, assigned with the specific responsibilities in executing the affairs of the establishment under this code & Rules in his respective designated domain.

(s) "Section" means the Section of the Code.

(t) "Schedule" means the schedule to these rules.

(u) "Manager": - A person nominated by the occupier who is heading the establishment by his position and possesses the administrative control over the day to day affairs of the establishment falling into scope of this code.

(v) "Week" for the purposes of section 2(zzk) of the code and these rules shall mean, for any local area or any class of establishments, the period of seven days commencing from the mid-night of Saturday or of such other day preceding the day on which the establishments of that area or class are ordinarily closed every week according to any scheme, order, arrangement, regulation, usage or custom, Provided that, where work is ordinarily carried on continuously in the establishment on all days of the calendar week, the term "week" in relation to any worker of the establishment shall mean that period of seven days commencing from the day on which the worker is not required to work.

(2) The words and expressions used in these rules and are not defined therein, but are in the Code, shall have respectively meaning assigned to them in the Code.

CHAPTER - II

REGISTRATION

3. Application for registration under section 3:-

(a) No establishment shall function without holding a valid certificate of registration granted by the Registering Officer.

(b) (i) The employer seeking registration for an establishment (Factories, Building and other construction works, Motor Transport undertakings, Plantations, Beedi and Cigar , Sales Promotion, Working Journalist and Contract Labour) not already registered shall apply electronically in **Form-I** to the Registering Officer appointed by the Government of Andhra Pradesh under sub-section (1) of Section 3 of the Code, within sixty (60) days from the date of such applicability of this code along with the fee prescribed in this rules.

(a) in case of factory, electronically through the Online Single Desk Portal

or any other portal if notified by the Government.

(b) in case of establishments other than factory, electronically through the online portal of Labour Department,

by giving details about the establishment, and uploading documents related to Registration of the establishment, proof of Identity and address of the employer(s) as specified in the Form. The Form shall be signed digitally or in any other manner as may be required on the portal. The applicant shall be responsible for veracity of all information submitted in the application.

(ii) The fees to be paid for the grant of a Registration Certificate for an establishment shall be as specified in the table below, namely;

Sl.No.	No of Workers	Registration Fee
1	Up to 50 workers	Rs. 1000
2	51 to 100 workers	Rs. 1500
3	101 to 150 workers	Rs. 2000
4	151 to 250 workers	Rs. 3000
5	251 to 500 workers	Rs. 5000
6	501 to 1000 workers	Rs. 10000
7	1001 to 5000 workers	Rs 20000
8	Above 5000 workers	Rs 30000

(iii)If the application for Registration is submitted after expiry of the prescribed period specified in Rule 3(2) (i), the application may be entertained only on payment of the additional fee of 10% of the registration fee for the delay of each month or fraction thereof in submission of application after the prescribed period, in addition to the fee payable under Rule 3(2)(i).

(c) The Permanent Account Number (PAN) of the applicant or the establishment allotted under Income Tax Act, 1961 or any other unique number allotted to the establishment under any other Act for the time being in force or any other particular furnished in the form may be verified online.

(d) The certificate of registration shall be issued in **Form-II** electronically immediately if the application is complete in all respect but not later than seven days from the date of submission of complete application, failing which such establishment shall be deemed to have been registered and the certificate of registration shall be auto generated.

(e) The certificate of registration shall be non-transferable and a copy of the certificate

of registration shall be displayed in the premises of the establishment at the conspicuous place in hard copy or electronically.

(f) The registering officer under the Code may direct the employer who fails to comply with the requirements of sub-rule (2), to do so within the time stated therein and such employer shall, thereupon comply with the instruction issued by the officer in this behalf.

(g) The employer in respect of an establishment already registered under any other labour law for the time being in force shall, update the registration particulars on single desk portal or any other online portal if notified by Government of Andhra Pradesh in case of Factories and on the portal of Labour Department in case of establishments other than factories, within six (6) months from the date on which the Code comes into force.

(h) The employer shall quote the Registration Number on all documents prepared or completed by him in connection with the Code or the Rules or the Regulations or the Scheme, as the case may be, and in all correspondence with the office concerned.

(i) The employer of an establishment to which the provisions of the Code apply and whose business activities are in process of closure, may apply for cancellation of registration on single desk portal or any other online portal if notified by Government of Andhra Pradesh in case of Factories and on the portal of Labour Department in case of establishments other than factories after giving complete details of the dues payable under the Central Labour Codes:

Provided that no such application for cancellation of registration shall be entertained unless the employer has furnished all statutory returns, paid all statutory dues under the Central labour Codes and any other labour law in force in accordance with the law applicable for the time being and submitted a self-certification to that effect along with the application.

(j) The registering officer shall maintain a register of establishment electronically in **Form-III** showing the particulars of establishment in relation to which certificates of registration have been issued by him.

4. Circumstances in which application for registration may be rejected:

(1) If any application for registration is not complete in all respect, the registering officer shall require the employer to amend the application so as to make it complete in all respect.

(2) If the employer, on being required by the registering officer to amend his application for registration, omits or fails to do so, the registering officer may reject the application for registration and the fee paid if any shall be forfeited.

5. Amendment of certificate of registration.

(a) The employer shall apply for the amendment of registration electronically in case of any change in the ownership, management or any particular furnished in **Form I** under sub-rule (2) of rule 3, within thirty (30) days of such change along with the online payment details of additional fees if any.

(b) The additional fees shall be the amount that would have been payable if the registration certificate had originally been issued in the amended form deducting the fees originally paid for the registration and the fee of Rs 500/-(Rupees Five Hundred Only) for each amendment to be carried on.

(c) Where, the registering officer notices that there has occurred a change in the particulars of the establishment, as entered in the register in **Form-III**, he shall amend the said register and record there-in the change which has occurred, within seven (7) days from the date of receipt of application complete in all respect.

Provided that no such amendment shall affect anything done or any action taken or any right, obligation or liability acquired or incurred before such amendment.

(d) The Registering officer, if satisfied that the Certificate of Registration has been obtained by mis-representation or suppression of any material, shall issue a show cause notice of 15 days to the employer electronically. The Registering officer, after having considered the reply of the employer if any received in response to Show Cause Notice within 15 days, may pass a Speaking Order duly recording the reasons either for initiating prosecution or otherwise, within 60 days and communicate to the employer electronically.

(e) The Registering officer, if satisfied that the Certificate of Registration has been obtained by the employer so fraudulently or otherwise that the registration has become useless or ineffective to run the establishment, shall issue a show cause notice of 15 days to the employer electronically. The Registering officer, after having considered the reply of the employer if any received in response to Show Cause Notice within 15 days, may pass a Speaking Order recording the reasons for revocation of certificate of Registration within 60 days and communicate to the employer electronically. A copy of the Order shall be forwarded to Appellate officer concerned.

6. Appeal under Section 4:

(a) The employer aggrieved by the order of Registering officer issued under section 3, may appeal against such order before the appellate officer appointed by the Government of Andhra Pradesh for such purpose within thirty days (30) from the date of receipt by him of such order, electronically.

(b) Where the memorandum of appeal is in order, the appellate officer shall admit the appeal, acknowledge it and intimate admission of such appeal, and shall register the appeal in electronic form to be kept for the purpose called the register of appeals.

(c) When the appeal has been admitted, the appellate officer shall send the notice of the appeal to the Registering Authority, against whose order the appeal has been preferred and the Registering Authority shall thereupon send the records of the case to the appellate officer online electronically.

(d) On receipt of the appeal, the appellate officer shall send a notice to the appellant to appear before him on such date and time as may be specified in

the notice for the hearing of the appeal electronically or by registered post.

(e) If on the date fixed for hearing, the appellant does not appear, the appellate officer may dismiss the appeal for default of appearance of the appellants by sending the copy of the order to the applicant electronically.

(f) Where an appeal has been dismissed, the appellant may apply electronically to the appellate officer for the restoration of the appeal within thirty (30) days from the date of receipt of the order and if the appellate officer is satisfied that the appellant was prevented by sufficient cause from appearing, the appellate officer shall restore the appeal.

(g) The order of the Appellate Officer shall be communicated electronically or by registered post to the appellant and copy thereof shall be sent to the registering officer against whose order the appeal has been preferred and shall be disposed of within a period of thirty (30) days from the date of receipt of appeal.

7. Notice of commencement and cessation of operation under Section 5.-

The employer of every establishment being a Factory, Motor Transport undertaking, Plantation, Beedi and Cigar , or relating to Sales Promotion, Working Journalist, or relating to contract labour or building and other construction work, shall within thirty days of the commencement or cessation of operation, submit to the Registering Officer in **Form-IV** , electronically and the notice of cessation of operation shall be enclosed with a self-certificate that the payment of all dues to the workers employed in the establishment have been made and the premises are kept free from storage of hazardous chemicals and substances.

CHAPTER - III

DUTIES OF EMPLOYER AND EMPLOYEE

8. Annual Health Examination of employees under clause (c) of sub-section (1) of Section 6.-

Every employer of Factories, Motor Transport undertakings, Plantations, Beedi and Cigar, Sales Promotion, Working Journalist and Building and Other Construction Works shall arrange to conduct free of cost, medical examination for every employee who has completed 45 years of age, at the time of joining for the first time and thereafter annually i.e. within 120 days from the commencement of the every calendar year. The medical examination shall be conducted by a qualified medical practitioner as per proforma in the **Form-V**. The Medical Certificate shall be submitted by the qualified medical practitioner to the concerned employer and employee.

9. Letter of appointment to employee under clause (f) of sub-section (1) of Section 6.-

No employee shall be employed in any establishment unless he has been issued a letter of appointment in the prescribed format as appended to this Rule:

Provided that, an employee who has not been issued an appointment letter containing the required particulars, shall be issued an appointment letter within three (3) months of coming into force of this rule.

Format

(a) Name of Employee:

(b) Father‘s name:

(c) Aadhar number:

(d) Labour Identification Number (LIN) of the establishment:

(e) Universal Account Number (UAN)/Insurance Number (ESIC):

(f) Registration number of the establishment under the OSH&WC Code:

(g) Name and address of the establishment:

(h) Designation:

(i)Category of skill:

(j)Date of joining:

(k) Wages, Basic Pay & Dearness Allowance:

(l)Other allowance including accommodation whichever is/are applicable

(m) Avenue for achieving higher wages/higher position:

(n) Applicability of social security EPFO and ESIC benefits applicable:

(o) Registration number issued by the AP Construction Workers welfare board:

(p) Registration number issued by the AP Labour welfare board:

(q) Health check-up:

(r) Broad Nature of duties to be performed

(s) Any other information:

Signature of Occupier/employer/owner/agent/manager

10. Notice of accidents and dangerous occurrences under sub-section (1) of section 10 and section11.-

(1) Where at any place in an establishment which is a Factory, Motor Transport undertaking, Plantation, Beedi and Cigar, or relating to contract labour or building and other construction work, an accident occurs which results in the death of any person, the employer of the establishment shall forthwith inform by telephone to the Inspector-cum- facilitator and Chief Inspector-cum Facilitator and District Magistrate or Sub-divisional Officer, the officer-in-charge of the nearest police station; and the family members /kin of the deceased person and shall forthwith send a notice thereof in **Form-VI** electronically within 12 hours of the occurrence

of the accident.

(2) Where at any place in an establishment which is a Factory, Motor Transport undertaking, Plantation, Beedi and Cigar , or relating to contract labour or building and other construction work, an accident occurs which results in bodily injury by reason of which the person injured is prevented from working for a period of forty eight (48) hours or more immediately following the accident, the employer of the establishment shall forthwith send a notice in **Form-VI** within twelve hours after the completion of forty eight hours, electronically to the Inspector-cum-Facilitator.

(3) Wherein an establishment there is any dangerous occurrence as specified in the schedule annexed hereto, whether causing any bodily injury or disability or not, a notice in **Form-VI** shall within twelve hours (12) be sent to:

1. The Inspector-cum-facilitator;
2. District Magistrate or Sub-divisional Officer;

Provided that if in the case of an accident or dangerous occurrence, death occurs to any person injured by such accident or dangerous occurrence after the notices and reports referred to in the foregoing sub-rules have been sent, the employer of the establishment shall forthwith send a notice thereof by telephone and electronically to the authorities and persons mentioned in sub-rules (1) and (2) and also have this information confirmed in writing within 12 hours of the deaths.

Provided further that, if the period of disability from working for 48 hours or more referred to in sub-rule (2) does not occur immediately following the accident, or the dangerous occurrence, but later, or occurs in more than one spell, the report referred to shall be sent to the Inspector-cum-Facilitator in the prescribed form within 24 Hours following the hours when the actual total period of disability from working resulting from the accident or the dangerous occurrence becomes 48 hours.

(4) No injured person shall be allowed to return to work without a fitness certificate issued by a qualified medical practitioner.

(5) Wherever the person injured does not return to work in the establishment before the expiry of Twenty one (21) days after the occurrence of the accident with or without disablement and wherever the person injured returns to work in the establishment after sustaining compensable disablement as a result of the accident, the employer of the establishment shall send to the Inspector-cum-Facilitator within Twenty eight (28) days of the occurrence of the accident, a written report on the prevailing status of the injured and follow it up as necessary with further reports once every fortnight thereafter, until the final report on the date of return to work of the person injured is made. In the event of the person injured not returning to work of his own accord or otherwise the full circumstances of the same should also be reported to the Inspector-cum-Facilitator by the Employer of the establishment within seven days of his name being removed from muster roll of the establishment. Even if the person injured were to be covered by the

Employees' State Insurance Scheme it shall be the responsibility of the Employer of the establishment to obtain the relevant information for the purpose of this rule and Form No. VI and report the same to the Inspector-cum-Facilitator as prescribed.

SCHEDULE

The following classes of dangerous occurrences, whether or not they are attended by personal injury or disablement, namely:-

(a) Bursting, of any plant or pipeline or equipment containing petroleum, steam, compressed air or other substance at a pressure greater than the atmospheric pressure;

(b) Collapse or failure of a crane, derrick, winch, hoist or other appliances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane.

(c) Fire, Explosion, leakage or release of harmful toxic gases, bursting out, leakage or escape of any molten metal, or hot liquid or gas and implosion;

(d) Explosion of a receiver or container used for the storage at pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas.

(e) collapse or failure of lifting appliances or hoist or conveyors or other similar equipment for handling building or construction material or breakage or failure of rope, chain or loose gears; overturning of cranes used in building or other construction work; falling of objects from height;

(f) collapse of any wall, floor, gallery, roof bridge, tunnel, chimney, wall, building or subsidence of soil or any other structure, platform, staging, scaffolding or any means of access including formwork; contact work, excavation and collapse of transmission;

(g) Spillage or leakage of hazardous substances and damage to their container; collapse, capsizing, toppling or collision of transport equipment within the establishment;

(h) fall from height of any excavation, loading or transport machinery;

(i) a failure of any structure or installation whereby the safety of persons may be endangered; or spark generated due to electrical flash-over causing burn injury to any person;

11. Notice of disease under sub-section (1) and (2) of section 12.-

(1) A notice in the following format shall be sent forthwith electronically, to the Inspector-Cum Facilitator or Chief Inspector-cum-facilitator, by the employer or occupier or manager of an establishment in which there occurs any disease as notified under the Third Schedule of the Code.

NOTICE OF DISEASE

1. Name of establishment:
2. Nature of establishment:
3. Details of Patient:
   (a) Name of Patient:
   (b) Works Number of Patient:
   (c) Address of Patient:
   (d) Precise occupation of Patient:
4. Nature of disease from which the patient is suffering:
5. Date of Detection of disease:
6. Details of Medical Practitioner:
7. Has the case been reported to the Medical Officer:

Date: Signature of employer or occupier or manager

(2) If any qualified medical practitioner attends on a person who is or has been employed in an establishment and who is or is believed by the qualified medical practitioner to be suffering from any disease specified in the Third Schedule, the qualified medical practitioner shall without delay send a report in writing to the office of the Chief Inspector-cum- facilitator stating-

(i) the name and full postal address of the patient,

(ii) the disease from which he believes the patient to be suffering, and

(iii) the name and address of the establishment in which the patient is or waslast employed.

12. Duties of employee under clauses (d) and (g) of section 13.-

Every employee employed in a factory shall alwaysco-operate in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of provisions of this code and building occupational Safety & Health culture. In particular, the employees of factories shall carry out the following duties.

(1) Every employee who comes to know about existence of any of unsafe or unhealthy conditions in the establishment shall report to the employer or health and safety representative or safety officer or concerned Supervisor as soon as practicable, electronically or in writing or telephonically.

(2) Every employee in a factory shall not make safety device or appliance or any guarding or fencing arrangement, inoperative or defective and shall report the

defective condition of the aforesaid arrangements as soon as he is aware of any such defect.

(3) Before commencing any work, all employees in the factory shall check their workplace as well as the machinery, equipment or appliance used and report any malfunction or defect immediately to the supervisor or any responsible person of the management.

(4) All employees shall always use all the personal protective equipment issued to them in a careful manner.

(5) All employees in a factory shall not remain in unauthorised place or carryout unauthorised work or improvise any arrangements or adopt short cut method or misuse any of the arrangements in the manner against to the interest of Occupational Safety & Health.

(6) The employees shall not refuse undergoing medical examination as required under these rules.

13. Rights of Employee under sub-section (3) of section 14.-

(1) On receipt of information from the employee of a factory relating to the existence of imminent danger to the health or Safety of the persons employed, the occupier or manager shall immediately hold a preliminary enquiry into the apprehensions brought to their notice and submit a preliminary report in writing in the office of Inspector cum Facilitator duly indicating the comments on the existence of imminent danger as well as the proposed further action plans for elimination of imminent danger if any found as reported, within 48 hours days from the time of receipt of the said information**.**

(2) A final report on the actions taken shall also be submitted to Inspector cum Facilitator immediately after completing the proposed actions. The decision of the Inspector cum facilitator shall be final on the question whether there is an imminent danger or not and whether it was satisfactorily addressed or not.

CHAPTER - IV

OCCUPATIONAL SAFETY AND HEALTH

14. Constitution of State Occupational Safety and Health Advisory Board under sub-sections (1) and (2) of Section17 .-(herein after called state advisory board)

(1) (a)The State Advisory Board shall be constituted as specified in Section 17(2) with the following members to advise the State Government on such matters arising out of the administration of this code as may be referred to it by the State Government:

(a) The Honorable Minster for Labour, Factories, Boilers and Insurance Medical Services, Government of Andhra Pradesh -Chairperson ex-officio

(b) Principal Secretary to Government, Labour, Factories, Boilers and Insurance Medical Services, Government of Andhra Pradesh - member Secretary ex-officio

(c) The Chief Inspectors cum Facilitators appointed under this code by Government of Andhra Pradesh –Members ex-officio

(d) Member Secretary, Andhra Pradesh Pollution Control Board-member ex-officio

(e) Regional Director-Employees' State Insurance Corporation, Andhra Pradesh-member ex-officio

(f) Director General, AP Disaster Response & fire Service, Government of Andhra Pradesh - member ex-officio

(g) Chief Electrical Inspector, Government of AP

(h) five representatives of employers- members

(i) five representatives of employees- members

(j) a representative of professional body associated with the matters related to Occupational Safety, Health and Working Conditions - member;

(k) two eminent persons connected with the field of Occupational Safety and Health from reputed research institutions or academic institutions - Members;

(l) special invitees as decided by the Government of Andhra Pradesh for seeking inputs in specific matters or industry or sector which is predominant in the State- Members;

Members of the State advisory Board as specified above shall be nominated and approved by the Government of Andhra Pradesh. The Board shall be reconstituted once in every 2 years from the date of the constitution.

(b) The State Advisory Board shall meet as often as necessary to discharge the functions as specified in section 17(1) of the Code.

(c) The State Government may, in consultation with the State advisory Board, determine the number, nature and categories of other officers and employees required to assist the State advisory Board in the efficient discharge of its functions and terms and conditions of service of such officers and employees of the State advisory Board shall be as such as notified by the State Government.

2) Resignation. -

(a) A member of the State advisory Board, not being an ex-officio member, may resign his office by a letter in writing addressed to the Chairperson of the State advisory Board.

(b) The seat of such a member shall fall vacant from the date on which his resignation is accepted by the State Government, or on the expiry of thirty days from the date of receipt of the letter of resignation by the State Government whichever is earlier.

3) Cessation of membership.-

If any member of the State advisory Board, not being an ex-officio member, fails to attend three consecutive meetings of the State advisory Board, without obtaining the leave sanctioned by the Chairperson of The State advisory Board for such absence, he shall cease to be a member of State advisory Board:

Provided that the State Government may, if it is satisfied that such member was prevented by sufficient cause from attending three consecutive meetings, direct that such cessation shall not take place and on such direction being made, such member shall continue to be a member of State advisory Board.

4) Disqualification for membership.-

A person shall be disqualified for being a member of the State advisory Board;

(i) if he is of unsound mind and stands so declared by a competent authority;
(ii) if he is an un-discharged insolvent; or
(iii) if he has been convicted for an offence, having a penalty of imprisonment of three months (3) ormore;

5) Removal from membership. -

The State Government may remove any member of the State advisory Board, if in its opinion such member has ceased to represent the interest which he purports to represent on such State advisory Board:

Provided that no such member shall be removed unless a reasonable opportunity of being heard for making a representation against the proposed action under this rule is given.

6) Travelling Allowance for members.-

(a) The travelling allowance of an official member shall be governed by the rules applicable to him for journey performed by him on official duties and shall be paid by the authority paying his salary as approved by the State advisory Board.

(b) The non-official members of the State advisory Board shall be paid travelling allowance for attending the meeting of the State advisory Board at such places as per the instructions issued by State advisory Board from time to time.

15. Collection of statistics and portal for inter-State migrant workers under sub-sections (1) and (2) of section 21.-

Every employer of an establishment shall submit the details of occupational safety and health statistics electronically on web portal notified for the purpose by the State Government.

16. Safety Committee under section 22.-

(1) Every establishment which is a

(i) factory employing two hundred and fifty persons or more; or

(ii) factory engaged in processing of hazardous substances wherein one hundred persons or more are employed; or

(iii) building or other construction work wherein two hundred and fifty persons or more are employed. shall constitute a safety committee consisting of equal representatives of employers and workers/Employees.

(2) The representatives of the management on safety committee shall include

(a) A senior official, who by his position in the organisation can contribute effectively to the functioning of the committee shall be the Chairman.

(b) A safety officer and a factory Medical Officer, wherever available and the safety officer in such a case shall be the Secretary of the Committee.

(c) A representative each from the production, maintenance and purchase departments.

(3) The workers representatives on this committee shall be nominated from their worker members by the recognized or else trade union or where such Trade Union is not in existence, the representatives shall be elected by the workers directly.

(4) The tenure of the committee shall be co-terminus with the tenure of the Trade Union or two years where there is no. Trade Union.

(5) Safety Committee shall meet as often as necessary but at least once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector on demand.

(6) Safety committee shall have the right to be adequately and suitably informed of-

(a) Potential safety and health hazards to which the workers may be exposed at workplace.

(b) Data on accidents as well as data resulting from surveillance of the working environment and of the health of workers exposed to hazardous substances so far as the factory is concerned:

Provided that the committee undertakes to use the data on a confidential basis and solely to provide guidance and advice on measures to improve the working environment and the health and safety of the workers.

(7) Function and duties of the Safety committee shall include-

(a) Assisting and co-operating with the management in achieving the aims and objectives outlined in the 'Health and Safety Policy' of the occupier

(b) Dealing with all matters concerning health; safety and environment and to arrive at practicable solutions to problems encountered

(c) Creating safety awareness amongst all workers

(d) Undertaking educational, training and promotional activities;

(e) Discussing reports on safety, environmental and occupational health surveys, safety audits, risk assessment, emergency and disaster management plans and implementation of the recommendations made in the reports ;

(f) Carrying out health and safety surveys and identify causes of accidents;

(g) Looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggest corrective measures; and

(h) Reviewing the implementation of the recommendations made by it.

(8) Where owing to the size of the factory, or any other reasons the functions referred to in sub-rule (7) cannot be effectively carried out by the Safety Committee, it may establish sub-committees as may be required to assist it.

17. Safety officers under section 22:

(1) A person shall not be eligible for appointment as a safety officer relating to factory or building or other construction work unless he possesses–

(i) a recognised degree in any branch of engineering or technology and has had practical experience in a supervisory capacity for a period of not less than two (2) years; or

(ii) a recognised degree in physics or chemistry and has had practical experience in a supervisory capacity for a period of not less than five (5) years; or

(iii) a recognised diploma in any branch of engineering or technology and has had practical experience in a supervisory capacity for a period of not less than five (5) years; and

(iv) possesses any Diploma in Industrial Safety conducted by any Institute under Directorate General, Factory Advice Service and Labour Institutes (DGFASLI), Ministry of Labour and Employment, Government of India (or) possesses a degree (or) a Diploma in Industrial Safety with equivalent syllabus and duration of not less than one (1) year awarded by any university incorporated under the Central or State Acts or Department of Technical Education or Board of Technical Education of any State / Union Territories / Government of India; and

(v) has adequate knowledge of Telugu Language.

Provided that the employer shall ensure that the safety officer appointed shall acquires adequate knowledge of the language spoken by majority of workers within one year from the date of such appointment.

(2) Notwithstanding anything contained in sub-rule (1), any person who –

(i) possesses a recognised degree or diploma in engineering or technology and has had experience of not less than five (5) years in a department of the Central or State Government which deals with the administration of the Factories, Building and other Construction works or

(ii) possesses a recognised degree or diploma in engineering or technology and has had experience of not less than five (5) years, full time, on training, education, consultancy, or research in the field of accident prevention in industry or in any institution; shall also be eligible for appointment as a safety officers.

(3) Recruitment of Safety officer:

(i) Selection for appointment to the post of Safety Officer shall be made, in accordance with the policy of the establishment if any, either by direct recruitment or by transfer or by promotion or deputation among the eligible candidates available for recruitment as Safety Officer under this code through a

Selection Committee appointed by the Employer of the Establishment.

(ii) The appointment of the Safety Officer, when made, shall be intimated electronically by the Employer of the Establishment to the Chief Inspector-cum-facilitator, giving details about the qualifications, previous experience, the terms and conditions of employment and any other relevant particulars of the officer appointed as well as the details of the selection committee. If no objections are communicated electronically by the Chief Inspector cum facilitator in this regard within 30 days from the date of receipt of this intimation, the said appointment shall be deemed to have been made in accordance with the provisions of this code.

(iii) Filling up of the vacancy of Safety Officer post**:**

Every vacancy aroused in the post of Safety Officer shall be forthwith intimated by the Employer to the Chief Inspector-cum-facilitator and shall be filled up within three months of the occurrence of such vacancy.

(4) Number of safety officers and Conditions of Service:

(a) The number of Safety Officers shall be appointed in an establishment as per the scale appended hereto.

No of Safety Officers required to be appointed	**Employment of persons in the Establishment**	
	Haz Process Factories & BOCW	**Others**
1	250 to 500 persons	500 to 1000 persons
2	501 to 1000 persons	1001 to 2000 persons
3	1001 to 1500 persons	2001 to 3000 persons
4	1501 to 2000 persons	3001 to 4000 persons
1 additional safety officer for	Every additional 1000 persons or fraction thereof	Every additional 2000 persons or fraction thereof

(b) When two or more Safety Officers are appointed, the senior most among them shall be designated as the Chief Safety Officer and shall have the status higher than that of others. The Chief Safety Officer shall be in overall charge of the safety functions as prescribed under subrule (5) and other Safety Officers shall work under his control.

(c) The Chief Safety Officer if required to be employed shall be given the corresponding status of a senior executive in the establishment who reports to the chief executive of the establishment and thereby he shall report directly to the Chief Executive of the establishment. All the Safety Officers shall be given appropriate executive status to enable them to discharge their functions effectively.

(d) The scale of pay and allowance to be granted to the Safety Officers including the

Chief Safety Officer and the conditions of their service shall be the same as those of the other officers of corresponding status in the establishment.

(e) The services of a Safety Officer appointed in accordance with this code shall not be dismissed or discharged or except censure, no other disciplinary action like stoppage of increment, reversion to lower pay scale, dismissal etc shall be initiated against him without the written concurrence of the Chief Inspector cum Facilitator who shall record the reasons therein.

(f) The Safety Officer who has been subjected to disciplinary action in the manner otherwise than the prescribed, shall be have the right to appeal to the Chief Inspector-cum-facilitator, whose decision thereon shall be final and binding upon the Employer of the establishment.

(g) The appeal shall be preferred within thirty (30) days from the date of the receipt of the order of disciplinary actions by the Safety Officer concerned.

(5) Duties of safety officer:

The duties of the Safety Officers shall be to advise and assist the Establishment in the fulfillment of its obligations, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe working environment. These duties shall include the following, namely:-

(a) to advise the concerned departments in planning and organising measures necessary for the effective control of personalinjuries;

(b) to advise on safety aspects in all job studies and to carryout detailed job safety studies of selected jobs ;

(c) to check and evaluate the effectiveness of the action taken or proposed to be taken to prevent personal injuries ;

(d) to advise the purchasing and stores departments in ensuring high quality and availability of personal protective equipment;

(e) to advise on matters relating to carrying out of plant safety inspections ;

(f) to carry out plant safety inspections in order to observe the physical conditions of work and the work practices and procedures followed by workers and to render advise on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by workers;

(g) to render assistance on matters relating to reporting and investigation of industrial accidents and occupational diseases ;

(h) to investigate all accidents and near-miss incidents ;

(i) to render assistance for the cases of industrial diseases contracted and in respect of dangerous occurrences reportable under rule 9.

(j) to render assistance on the maintenance of such records as are necessary relating to accidents, dangerous occurrences and industrial diseases ;

(k) to promote setting up of safety committees and act as adviser and catalyst to such committees ;

(l) to organise in association with the concerned department/ campaigns, competitions, contests and other activities which will develop and maintain the interest of the workers in establishing and maintaining safe conditions of work and procedure ; and

(m) to design and conduct either independently or in collaboration with the training department, suitable training and educational programmes for the prevention of personal injuries and for the propagation of safety awareness.

6. Facilities to be provided to safety officer

An Employer of the Establishment shall provide each Safety Officer with adequate technical and secretarial staff and other facilities, equipment and information as are necessary to enable him to discharge his duties effectively and efficiently.

7. Prohibition of performance of other duties

No Safety Officer shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of the duties prescribed in rule 28.

CHAPTER-V
HOURS OF WORK AND ANNUAL LEAVE WITH WAGES

18. Daily &Weekly working hours under clause (b) of sub-section (1) of Section25.-

(1) No worker shall be required or allowed to work in an establishment for more than 8 hours a day and forty-eight hours in any week.

(2) The period of work of a worker shall be so arranged that inclusive of his intervals for rest, shall not spread over for more than ten and a half hours in a day.

(3) The period of work of workers shall not exceed five hours before he has had an interval for rest of at least half an hour.

19. Weekly day of rest under sub-section (2) of section26.

(1) Subject to Rule 2(w) of these rules, the first day of the week is the weekly day of rest for each worker in a factory. No adult worker shall be required or allowed to work in a factory on the weekly day of rest (hereinafter referred to as the said day), unless-

(i) he has or will have a holiday for a whole day on one of the three days immediately before or after the said day, and

(ii) the employer of the establishment has, before the said day or the substituted day under clause (i), whichever is earlier,-

(a) delivered a notice at the office of the Inspector-cum-facilitator of his

intention to require the worker to work on the said day and of the day which is to be substituted, and

(b) displayed a notice to that effect in the factory.

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day.

(2) Notices given under sub-rule(2) may be cancelled by a notice delivered at the office of the Inspector-cum-facilitator and a notice displayed in the establishment not later than the day before the said day or the holiday to be cancelled, whichever is earlier.

(3) Where, in accordance with the provisions of sub-rule (2), any worker works on the said day and has had a holiday on one of the three days immediately before it, that said day shall, for the purpose of calculating his weekly hours of work, be included in the preceding week.

20. Compensatory holidays under sub section (3) of section 26:

(1) Except in the case of worker engaged in any work which for technical reasons must be carried on continuously throughout the day, the compensatory holidays to be allowed under sub-section (3) of section 26 of the Code shall be so spaced that not more than two (2) compensatory holidays are given in one week.

(2) The employer of the establishment shall display, on or before the end of the month in which holidays are lost, a notice in respect of workers allowed compensatory holidays during the following month and of the dates thereof, at the place at which the notice of periods of works prescribed under section 26 is displayed. Any subsequent change in the notice in respect of any compensatory holiday shall be made not less than three (3) days in advance of the date of that holiday.

(3) Any compensatory holiday or holidays to which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.

(4) The manager shall, in prescribed record of attendance, indicate the days on which the worker was required to work and the days on which he was allowed the compensatory holidays.

21. Extra Wages for overtime under section 27.-

(1) Notwithstanding to the conditions on Hours of work under Rule 18(1), a worker in an establishment may be required or allowed to work extra hours with the previous consent of the worker in writing for any of the following works as may be recorded in the said consent.

(i) urgent repairs;

(ii) work in the nature of preparatory or complimentary work;

(iii) work which is necessarily so intermittent that the intervals during which

they do not work while on duty ordinarily amount to more than the intervals for rest;

(iv) work which for technical reasons must be carried on continuously;

(v) engaged in making or supplying articles of prime necessity which must be made or supplied every day,

(vi) engaged in a process which cannot be carried on except during fixed seasons;

(vii) engaged in a process which cannot be carried on except at times dependent on the irregular action of natural forces;

(viii) engaged in an engine-rooms or boiler-houses or in attending to power-plant or transmission machinery;

(ix) engaged in process on account of the break-down of machinery;

(x) engaged in the loading or unloading of railway wagons or lorries or trucks;

(xi) exceptional press of work and

(xii) engaged in any work, which is notified by the Central Government in the Official Gazette as a work of national importance;

(2) Any worker who works either for more than eight hours in any day or for more than forty-eight (48) hours in any week, as the case may be, he shall in respect of such overtime work be entitled to wages at the rate of twice his ordinary rate of wages and shall be paid at the end of each wage period.

(3) Period of overtime work shall be entered in overtime slips in duplicate with the below particulars, a copy of which duly signed by the manager or by a person duly authorized by him shall be given to the worker immediately after completion of the overtime work.

Overtime Slip

Name & Address of the Establishment:	
Name & Designation of the Worker	
Date of Work & Normal Period of work	
Overtime period and duration in Hours	
Work performed on Overtime	
Signature of Manager/Person Authorized	

(4) The employment of a worker on overtime shall be subject to the following restrictions with respect to number of hours of overtime work to be worked by any worker.

(a) No worker shall be required or allowed to work in an establishment for more than 8 hours on overtime in any day.

(b) No worker shall be required or allowed to work in an establishment for more than 16 hours on overtime in any week.

(c) No worker shall be required or allowed to work in an establishment for more than 48 hours on overtime in any month

(d) No worker shall be required or allowed to work in an establishment for more than 120 hours on overtime in any quarter.

22. Restriction of double employment under section 30:

An adult worker may be employed in more than one factory on the same day if,-

(a) he is employed or engaged on a part-time basis to do any work; or
(b) he is employed or engaged to carry out any particular work of an occasional nature otherwise than as a full-time employee; or
(c) the occupier or owner is unaware that the worker is employed on a full-time basis in any other factory

23. Notice of periods of work under section 31 (2).-

The notice referred to in section 31 shall be displayed at conspicuous places on a notice board or electronic board in Telugu, English and language understood by the majority of the employees in **Form-VII** and copy of such notice shall be sent to Inspector-cum-facilitator electronically or by registered post.

24. Annual leave with wages under section 32:

(1) Account of leave with wages:- The employer shall on a request from any worker, forthwith provide him with an abstract of his account of leave earned, leave allowed and the balance of leave standing to his credit for the period not exceeding one year period to the date of such request

(2) Medical Certificate:- If any worker is absent from work due to his illness and he wants to avail himself of the leave with wages due to him to cover the period of illness as far as possible under the provisions of the code shall, if so required by his manager by a notice in writing, submit a medical certificate signed by a registered Medical practitioner.

(3) Grant of leave with wages:-

(1) Whenever leave with wages is granted to any worker, necessary entries shall be made in the leave with wages record.

(2) As far as circumstances permit, members of the same family shall be allowed leave at the same time.

(3) A worker may exchange the period of his leave with another worker subject to the approval of the Manager

(4) Payment of wages if the worker dies:- If a worker dies, the cash equivalent to the balance of leave in his credit shall be paid to his nominee within one week of the receipt of intimation of death of the worker.

(5) Payment wages if worker resigns:-**I**f the worker resigns from the establishment, the leave with wages due to him shall be paid at the time of relieving the said worker from the establishment

CHAPTER-VI
MAINTENANCE OF REGISTERS, RECORDS AND RETURNS

25. Maintenance and production of reports, registers and other records under section 33:

(1) The following registers, records etc shall be maintained in an establishment and shall be produced or caused to be produced, electronically or Physically or by registered post as the case may be, on demand before the Chief Inspector-cum-facilitator or an Inspector-cum-facilitator or any person authorized in that behalf of the Government of Andhra Pradesh.

(i) Every employer or contractor subject to the provisions of this code, as the case may be, shall maintain a muster roll of all the persons employed by him in the factory in **Form-XII** electronically or otherwise and entries of attendance shall be made up to date at the time of commencement of work in each day. The particulars like weekly day of rest, Substituted or Compensatory holiday allowed, days of leave, Overtime hours worked etc shall also be reflected in the record. The employer shall make it readily available for inspection to the inspector-cum-facilitator at all times during working hours.

(ii) Every employer shall maintain register of workers, wages, overtime, fine, deduction for damage or loss in **Form-VIII** electronically.

(iii) Every employer shall maintain a record of leave with wages in electronic form or otherwise in **Form XI.**

(iv) The registers of accident and dangerous occurrences in **Form-X.**

(v) A record of Overtime slips issued to each worker when the workers are each time employed on overtime.

(vi) Such records, as may be prescribed by the Chief Inspector cum facilitator in respect of monitoring of working environment in the factory.

(2) In case of manual registers and other records, entry shall be made with indelible ink in the language understood by a majority of the persons employed;

(3)All reports, registers and other records shall be preserved in original for a period of three (3) calendar years after the date of the last report or entry.

Provided that when the original record is lost or destroyed before the expiry of three(3) years period, true copies thereof, if available, shall be preserved for the prescribed period;

(4)Display of notice board: Every employer shall cause to display at the entrance of premises of establishment under his control, a prominent board showing the name and address of the establishment and a notice at the conspicuous place in the establishment showing hours of work, wage period, date of payment of such wages, details of accident and dangerous occurrence in the establishment for the last five years, name and address of the Inspector-cum-facilitator having jurisdiction to such establishment in Telugu, English and in the Language understood by the majority of the workers.

(5)Return: Every employer of an establishment shall submit annually a return relating to such establishment in **Form-IX**to the Inspector-cum-facilitator having jurisdiction through the online portal as notified by the State Government as to reach him not later than 31st January following the end of each calendar year with a copy to Director General, Labour Bureau electronically.

CHAPTER- VII

INSPECTOR-CUM-FACILITATOR AND OTHER AUTHORITY

26. Power to take samples of any articles or substances under clause (x) of sub-section (1) of section 35.-

(1) An Inspector-cum-facilitator shall take sufficient sample of any substance used or intended to be used in a factory, after informing its employer, in the manner herein after provided, such use being–

(i) in the belief of the Inspector-cum-Facilitator in contravention of any of the provisions of this code or the rules made there under, or

(ii) in the opinion of the Inspector-cum-Facilitator likely to cause bodily injury to, or injury to the health of employee in the establishment.

(2) Where the Inspector-cum-facilitator takes a sample under sub-rule (1), he shall, in the presence of the person informed under that sub-section unless such person willfully absents himself, divide the sample into three portions and effectively seal and suitably mark them, and shall permit such person to add his own seal and mark thereto.

(3) The person informed as aforesaid shall, if the Inspector-cum-facilitator so requires, provide the appliance for dividing, sealing and marking the sample taken under this section.

(4) The Inspector-cum-facilitator shall-

(i) forthwith give one portion of the sample to the person informed under sub-rule(1);

(ii) forthwith send the second portion to a Government Analyst or National Accreditation Board for Testing and Calibration Laboratories (NABL) for analysis and report thereon;

(iii) retain the third portion for production to the Court before which proceedings, if any, are instituted in respect of the substance.

(5) Any document purporting to be a report under the hand of any Government Analyst or NABL accredited laboratory upon any substance submitted to him for analysis and report under this section, may be used as evidence in any proceedings instituted in respect of the substance.

27. Powers and duties of Inspector-cum-facilitator under clause (xiv) of sub-section (1) of Section 35.-

(1) If it appears to the Inspector-cum-facilitator that any building or part of a building or any part of the ways, machinery or plant in a factory or any building or other construction work is in such a condition that it is dangerous to human life or safety or health, he may serve on the occupier of the factory or employer of the building or other construction work, an order in writing specifying the measures which in his opinion should be adopted and requiring them to be carried out before a specified date.

(2) If it appears to the Inspector-cum-facilitator that the use of any building or part of a building or any part of the ways, machinery or plant in a factory or any building or other construction work involves imminent danger to human life or safety or health, he may serve on the occupier of the factory or employer of the building or other construction work an order in writing prohibiting its use until it has been properly repaired or altered.

(3) Inspector-cum-Facilitator shall, after every inspection, as may be deemed necessary, issue improvement notice pointing out the non-compliance of provisions of safety, health and working conditions under the Code, and rules and regulations framed there under, to the employer of the establishment.

28. Appointment of Medical officer under sub-section (1) & (2) of section 42.-

(1) The Medical Officer shall be a medical practitioner who possesses any recognised medical qualification as defined in the National Medical Commission Act, 2019(30 OF 2019) and who is enrolled on a Indian Medical Register as defined in clause (e) and on a State Medical Register as defined in clause (l) of section 35, 36, 37 and 40 of the Act.

(2) Duties of Medical Officer:-

(1) On receipt of a reference under clause (c) sub section (2) of section 42 of the code, the Medical Officer shall, after giving prior notice regarding date, time and place for medical examination and upon examining the person sent for such examination, prepare the age and fitness certificate and deliver the same to the employer of the establishment concerned after retaining a copy thereof.

(2) The medical officer may seek opinion of specialists like radiologist, dentist and orthopedic surgeon as the case may be, for the purpose of determination of age.

(3) Medical Officer shall carry out such examination and furnish such report as state Government may direct.

(i) for examination and certification of workers in an establishment in such dangerous occupation or hazardous processes as specified in First Schedule to the Code;

(ii) for medical supervision of any establishment or class of establishment where cases of chronic occupational illness have occurred due to arduous nature of any process carried on or hazardous condition of work;

(iii) in respect of any establishment or class of establishment or description of establishment in which operations involve any risk of injury to the health

of any person or class of persons employed therein;

(iv) to undertake occupational health survey for any or class of an establishment, where cases of illness have occurred or there is prevalence of diseases as prescribed in Third Schedule of the code.

(v) to assess the age and issue fitness of adolescent for employment in an establishment or class of establishment.

CHAPTER-VIII

SPECIAL PROVISION RELATING TO EMPLOYMENT OF WOMEN

29. Employment of Women in establishment under Section 43.-

The following conditions shall be met for employment of women during night or before 6.00 a.m. and beyond 7.00 p.m in any day, namely:-

(i) the consent of women employee shall be taken;

(ii) No women shall be employed against the maternity benefit provisions laid down under the Social Security Code, 2020 (36 of 2020);

(iii) adequate transportation facilities shall be provided to women employee to pick-up and drop such employee at her residence;

(iv) the workplace including passage towards conveniences or facilities concerning toilet, washrooms, drinking water, entry and exit of women employee should be well-lit;

(v) the toilet, washroom and drinking facilities should be near the workplace where such women employees are employed;

(vi) Sanitary napkins of adequate quantity conforming to relevant Indian Standards formulated by Bureau of Indian Standards shall be provided and maintained in the women's toilets for their use, and the same shall be replenished on daily basis;

(vii) Disposable bins with lids shall be provided within the women's toilets for the collection of the used sanitary napkins. The used sanitary napkins shall be disposed off in a safe, hygienic and eco-friendly process by using suitable electrical incinerator;

(viii) Provide safe, secure and healthy working condition such that no women employee is disadvantaged in connection with her employment; and

(ix) The provisions of the Sexual Harassment of Women at workplace (Prevention, Prohibition and Redressal) Act, 2013 (Act.No.14 of 2013), as applicable to the establishments, shall be complied with.

30. Safety of employment of women under section 44:

(1) No women worker shall be allowed or required to work near the machinery in motion without wearing head cap, apron and suitable overcoat so as to avoid the risk of entanglement of cloths and bodily injury from any moving part.

(2) Notwithstanding the provisions under clause (iv) of sub-section (1) of section 24, suitable arrangements for sitting shall be provided and maintained separately for all women workers obliged to work in the standing position, in order that they may take advantage of any opportunities for rest which may occur in the course of their work.

(3) As far as practicable woman worker shall not be engaged in any workplace involving poor ergonomics detrimental to the safety and health.

(4) The employer shall ensure that the women are not allowed to expose to materials if any which may influence or affect their menstrual cycles, reproductive health or pregnancy.

CHAPTER-IX

CONTRACT LABOUR

31. Conditions of License under sub-section (3) of section 47:

(1)The contractor shall ensure that:

(i) the hours of work shall conform to the rules made under Section 25 of the Occupational Safety, Health and Working Conditions Code, 2020 (Act.No.37 of 2020).

(ii) the wages shall be paid in accordance with the Code on Wages, 2019 (Act.No29 of 2020).

(2) The contractor shall intimate within fifteen days of the receipt of a contract work order about the details the contract work order and in the manner as under rule54.

(3) (i) If contract worker of the contractor is working at the premises of the principal employer the then it shall be the responsibility of the principal employer to provide the facilities or amenities such as toilet, washroom, drinking water, bathing facilities if required, changing room, first aid box, Canteen and Crèche

(ii) All other facilities and entitlements other than those specified in clause (i) of sub-rule (3) shall be provided by the contractor.

(4) In case the contractor fails to make payment of minimum wages to the contract worker, then the authority notified under sub-section (1) section 45 of the Code on Wages, 2019, who shall cause such payment to be made to the contract workers.

32. Form and manner of application for contractor license under of sub-section (1) of section 48.-

Every application by a contractor for the grant of a license shall be made **in Form XIII**,

(1) in case of establishment or building and other construction works, electronically through the Online Portal of the col.labour@gmail.com

(2) in case of establishments other than establishment or building and other construction works, electronically through the online portal of Labour Department, in **Form-XIV** to the licensing authority along with online

payment of the appropriate license fee specified in Rule 50

33. Forms, terms and conditions of license.-

(1) Every license granted shall be in **Form-XIV**.

(2) Every license granted or renewed is subject to the following conditions, namely:— the license shall be non-transferable;

(i) the number of workers employed as contract labour by the contractor shall not, on any day, exceed the maximum number specified in the license;

(ii) save as provided in these rules, the fees paid for the grant, or as the case may be, for renewal of the license shall be non-refundable;

(iii) the rates of wages payable to the workers by the contractor shall not be less than the rates prescribed under the Code on Wages, 2019 and where the rates have been fixed by agreement, settlement or award, not less than the rates so fixed.

34. Procedure for issue of license under sub-section (2) of section 48.-

(1) Before a license is issued, an amount calculated at the rate of (Rupees One Thousand) Rs.1000/- for each of the workmen to be employed as contract labour, in respect of which the application for license has been made, shall be deposited by the contractor for due performance of the conditions of the license and compliance with the provisions of the Code or the rules made there under.

(2) The amount of security deposit to be deposited under sub-rule (1) shall be paid through the online portal or me-seva.

(3) Wherein the issued contract license had expired, based on the request of the applicant in Form, the licensing officer may adjust the security deposit in respect of his application for new license.

(4) The fees to be paid for the grant of a license shall be as specified in the table below, namely;

No. of Labour	Fees Rs.
(1)	(2)
Upto 50	5,000/-
51 to 100	10,000/-
101to 200	15,000/-
201to 300	20,000/-
301 to 400	25,000/-
401 to 500	30,000/-
501 to 1000	40,000/-
Above 1000	50,000/-

(5) License issued under this rule shall be valid for five years.

35. Renewal of license under section 48.-

(1) Every contractor shall apply electronically to the appropriate licensing authority for

renewal of the license in **Form-XIII**.

(2) Every such application shall be submitted on the said portal at least 30 days prior to expiry of license period but not before 90 days of such expiry of license.

(3) The security deposit and the fee chargeable for renewal of the license shall be the same as for the grant of license under rule 50.

Provided that if the application for renewal is not received within the time specified in sub- rule (2), an additional fee of twenty five percent, shall be payable for such renewal.

(4) It shall be the responsibility of the principal employer concerned to renew license within 30 days.

36. Refund of security deposit.-

(1) On expiry of the period of license the contractor may, if he does not intend to have his license renewed further, make an application electronically to the licensing authority for the refund of the security deposited by him along with copy of License and notice of completion of work.

(2) If the Licensing authority is satisfied that there is no breach of the conditions of license or there is no order for the forfeiture of security deposit or any portion thereof, he shall direct the refund of the security deposit to the applicant.

(3) If there is any order directing the forfeiture of any portion of contractor‘s security deposit, the amount to be forfeited shall be deducted from the security deposit, and balance, if any, shall be refunded to the contractor.

(4) Any application for refund shall, as far as possible, be disposed of within 30 days of the receipt of the application.

37. Responsibility of contractor under sub-section (4) of section 48.-

(1) The rates of wages payable to the workers by the contractor shall not be less than the rates prescribed under the Code on Wages, 2019 and where the rates have been fixed by agreement, settlement or award, not less than the rates fixed.

(2) In case where the worker employed by the contractor perform the same or similar kind of work as the worker directly employed by the principal employer of the establishment, the wage rates, holidays, hours of work and other conditions of service of the workers of the contractor shall be the same as applicable to the workers directly employed by the principal employer of the establishment on the same or similar kind of work. In case of any dispute whether the work is of similar kind, the matter be referred to the Inspector-Cum Facilitator whose decision shall be final.

(3) In other cases the wage rates, holidays, hours of work and conditions of service of the workers of the contractor shall be such as specified under the Code and rules made there under.

(4) All contract labour shall be made member of Employee’s Provident Fund organization (EPFO) and Employee State Insurance Scheme(ESIC) subject to

applicability as under respective provisions of the Code on Social Security,2020.

(5) The contractor shall notify in Form XIV any change in the number of workers or conditions of work to the Licensing Authority, electronically.

38. Intimation of work order and time limit for intimation under section 50.-

(1) Every contractor shall within fifteen days of the receipt of a contract work order shall intimate about the contract work order containing the details such as the name of the principal employer, address of the premises where work is being undertaken, date of commencement of the contract work, the number of contract labour employed under that work order, duration of work orders.

(2) The details of work order shall be sent by the contractor or his authorized representative.

(3) The intimation shall be sent electronically on the Online Portal of the Directorate of Industrial Safety and Health/ web portal of the Labour Department.

39. Revocation or suspension of license under section 51.-

(1) If the Licensing Authority is satisfied that the License has been obtained by mis-representation or suppression of any material fact or if the contractor has failed to comply with the conditions subject to which License was granted or the contractor has contravened any provision of the Part-I, Chapter XI of the Code or rules made there under, the Licensing Authority shall issue a show cause notice of fifteen (15) days to the contractor electronically. On receipt of the reply if any, from the contractor within fifteen (15) days, the Licensing Authority shall examine the same and in case the licensing authority feels that the continuation of contract business by the contractor is going to lead to grave harm to the workers, he may pass a Speaking Order recording the reasons for revocation or suspension or otherwise and communicate to the contractor electronically.

(2) If the contractor has complied with the said provisions of the code and rules made there under within the stipulated time period, the Licensing Authority shall revoke the suspension giving a Speaking Order or else the suspension may be continued.

(3) If the contractor fails to comply with the directions as in sub-rule (1), the Licensing Authority may forthwith pass an order of revocation of license, recording the reasons thereof and communicate to the contractor electronically.

40.Amendment of license under sub-section 2 of section 51.-

(1) Every contractor shall apply electronically to the appropriate licensing authority for the amendment of license in **Form-XIII**along with the online payment or through mee-seva of appropriate fee and security deposit for such amendment.

(2) Every such application shall be submitted on the online portal within fifteen (15) days from the date of such amendment required in the license.

(3) The fee for the amendment of the license shall be five hundred rupees plus the amount that would have been payable if the license had originally been issued in

the amended form deducting the fees originally paid for the license.

(4) The additional amount of security deposit shall be at the rate of Rs.1000/- (one thousand rupees only) for every worker.

41. Single License for Contractor in more than one establishment in Andhra Pradesh –

(1) The contractor opting for a single license for supplying or engaging contract labour undertaking or executing the contract works under sub-section (1) or sub-section (2) of section 47,

(i) in case of more than one establishment or building and other construction works located in different locations in Andhra Pradesh, shall apply electronically on the Online Portal of the col.labour@gmail.com

(ii) in case of more than one establishments other than establishment or building and other construction works located in different locations in Andhra Pradesh, shall apply electronically on the online portal of col.labour@gmail.com, in **Form-XIII** to the licensing authority as notified by the State Government under sub- section (1) of section 119 of this code along with the cumulative license fees of each establishment involved therein.

(2) All the provisions of rules 31 to 39 shall apply mutatis mutandis in case of the single license granted under sub-rule (1)

(3) License issued under this rule shall be valid for five (5) years.

42. Appeal under sub-section (1) of section 52:

The appellate authority under sub-section (1) of section 52 of the Code shall be an authority notified by State Government.

43. Responsibility of Payment of wages under section 55:

(1) The contractor shall fix the wage periods in respect of which wages shall be payable and no wage period shall exceed one (1) month.

(2) The wages of every person employed as contract labour in an establishment or by a contractor shall be paid before the expiry of seventh day after the last day of the wage period in respect of which the wages are payable.

(3) The wages shall be disbursed through bank transfer or electronic mode only.

44. Making payment of wages from the security deposit amount under sub-section (4) of section 55:-

If the contractor or principal employer does not pay the wages to the contract labour employed by him, the Chief Inspector-cum-facilitator or the competent officer as may be notified by the State Government shall conduct or cause to conduct, an inquiry and after giving an opportunity to be heard to the contractor shall pass an order to make payment if any, of such wages from the amount deposited by the contractor as security deposit. The contractor shall re-furnish the security deposit within a period of fifteen days or else his license will be liable to be suspended. In case of contractor

fails to make payment of wages within the prescribed period or makes short payment, then the principal employer shall be liable to make payment of wages in full or the unpaid balance due, as the case may be, to the contract labour employed by the contractor and recover the amount so paid deduction from any amount payable to the contractor under any contract or as a debt payable by the contractor.

45. Experience Certificate under section 56:-

Every concerned contractor shall issue on demand, experience certificate in **Form-XV** to the contract labour giving details of the period, work performed, experience gained in various fields performed by such contract labour.

46. Prohibition of employment of contract labour under clause (b) of sub-section (2) of section 57.-

If a **question** arises as to whether any activity of an establishment is a core activity or otherwise, the aggrieved party may make an application, to the authority notified by the Government of Andhra Pradesh, giving reasons along with supporting documents.

CHAPTER-X

INTER-STATE MIGRANT WORKER

47. Journey allowance to Inter-State Migrant Worker under section 61.-

The employer shall pay a lump sum amount on account of fare for to and fro journey to inter-state migrant worker by train (not less than II Class Sleeper) or by bus or any other mode of passenger transport from the place of employment to the place of residence in the home- state in the event of the following, namely:

If he has worked for a period of not less than 180 days in the concerned establishment(s) in preceding twelve months;

Provided that the journey allowance shall be given to an inter-state migrant worker once in twelve months. In the event of change of employer by the inter-state migrant worker during the middle of the employment period and has not availed the journey allowance from his previous employer, then on the basis of a certificate to be given by inter-state migrant worker, the employer where the inter-state migrant worker is now working and the such worker has completed one hundred and eighty days in preceding twelve months including the period spent with the previous employer, then the employer shall give journey allowance.

48. Setting up of a Toll Free helpline number to the inter-state migrant worker under section 63.-

A Toll-Free help-line number shall be provided by Government of Andhra Pradesh, to address queries and grievances of the inter-state migrant workers.

49. Study of inter-state migrant workers under section 64.-

The Government of Andhra Pradesh may identify the studies to be carried out to promote safety, health and welfare of inter-state migrant workers.

CHAPTER- XI

BEEDI AND CIGAR WORKERS

50. Form of application for grant of License under sub-section (1) of Section 74:

(1) Every application under sub-section (1) of section 74 for a License to use or allow to be used any place or premises as an industrial premises for Beedi and Cigar establishments shall be made electronically to the licensing authority as notified by the State Government through Labour Department Web Portal in Form XIII.

(2) The applicant shall fill the application and upload the following documents namely:-

(a) Plans showing,-

(i) The site of such place or premises, the areas therein to be used for manufacturing processes and the immediate surroundings of such place or premises, including adjacent buildings, structures, roads, drains and the like ; and

(ii) the plan, elevation and necessary cross-sections of the details relating to natural lighting, ventilation, means of escape in case of fire, position of the plant and machinery, if any, used aisles and passage ways in or in relation to the various buildings which are intended to be used for manufacturing processes ; and

(b) Online payment of appropriate fee for the License as specified in Rule 54.

(3) Before granting a License, the competent authority shall also take into consideration whether the site of any industrial premises is proposed to be altered or whether any industrial premises is proposed to be altered or whether any industrial premises has been closed, by the applicant during the period of twelve months immediately preceding the date of the application with a view to causing prejudice to the interests of the labour.

51. Form and terms and conditions of license:-

(1) A License granted under the Act shall be in Form XIV.

(2) The terms and conditions subject to which such License may be granted or renewed shall be the following, namely:-

(i) The manufacturing process shall be carried on only in that part of the premises specified in the License

(ii) The total number of employees employed in the premises shall not on any day, during the period of the License, exceed that specified in the License.

(iii) No machinery or power which has not been specified in the License shall be used in the manufacturing process in the premises.

(iv) No industrial premises reconstructed or extended subsequent to the grant or renewal of the License shall be used as industrial premises except with the written permission of the licensing authority.

(v) The License shall not be transferable from one employer to another except in the cases and in accordance with the procedure specified in rule 50(2).

(vi) The fees paid shall not be refunded except in the cases specified in rule 55.

(vii) The competent authority shall, before granting the licence, satisfy himself that new branches were opened by management by way only to expand business, and shall take into account the history of such management closing and opening business in that area.

(viii) The licensing authority may, in addition to the foregoing terms and conditions, determine and specify in the License such other terms and conditions, in individual cases as it may deem necessary.

52. Renewal of license:

(1) Every application for the renewal of License shall be in Form XIII and apply electronically on the Labour Department Web Portal to the Licensing Authority as notified for renewal of the License.

(2) Every such application shall be submitted on the said portal at least 30 days prior to expiry of License period.

Provided that if the application for renewal is not received within the time specified in sub-rule (2), an additional fee of 25% for renewal is sent within a period of one month from the date of expiry of license, an additional fee of 50% for renewal is sent after the expiry of 30 days but within 60 days of date of the expiry of the licence, and an additional fee of 100% for renewal is sent after the expiry of 60 days and within 90 days from the date of expiry of license in addition to the Rule 54 for the renewal of the license shall be payable for such renewal.

53. Appeals under section 75:

An appeal under section 75 of the Act shall –

(a) be made electronically within a period of thirty days from the date of receipt of the order **south** to be appealed against ; and

(b) The appropriate fee in respect of the appeal as specified in sub-rule (2) of rule 54 has been paid.

54. Fees –

(1) The fees to be paid for the grant or renewal of a License under section 74 shall be as specified in the Table below:-

TIME TABLE

	Fees for Industrial	Fees for Industrial

		premises in which power driven machinery is used	premises in which power driven machinery is not used
If the number of employees proposed to be employed on any day during the financial year for which the License is required or renewed:-			
	(1)	(2)	(3)
		Rs.	Rs.
(a)	Does not exceed ten	500	300
(b)	Exceed ten but does not exceed twenty	1000	800
(c)	Exceeds twenty but does not exceed fifty	1500	1200
(d)	Exceeds fifty but does not exceed hundred	2500	2200
(e)	Exceeds hundred but does not exceed two hundred and fifty	3500	3200
(f)	Exceeds two hundred and fifty	5000	4000

(2) The fees payable in respect of an appeal under section 75 of the Act shall be – Rs.500/-

55. Refund of fees:-

(1) If the licensing authority refuses to grant or renew any License under section 74, it shall order the refund of the fees paid thereof.

(2) If no industry or manufacturing process connected with the making of beedi or cigar is carried on in an industrial premises at any time during the period of validity of the License in respect thereof, the License may within a period of three months from the last date of the financial year for which the License was granted or renewed, apply to the competent authority for the refund of the fee paid by him for such License and the competent authority shall, after making such enquiry as he may deem necessary and after satisfying himself about the correctness of the statements made in the application, order refund of such fee.

56. Amendment of license:-

(1) A License granted or renewed under the Act and these rules may be amended by the licensing authority on an application from the licensee.

(2) The application for the amendment of a License shall be accompanied by:-

(i) A statement indicating the nature of the amendment required:

(ii) A statement showing the change in particulars already furnished in Form No XIII under rule 50 which necessitate the application for amendment;

(iii) Fresh plans as provided in rule 50 in cases where the plans submitted with the original application no longer hold good:

(iv) The appropriate fee for the amendment of License has been paid in electronically

(v) the license granted to be uploaded.

(3) The fee for the amendment of License shall be Rs 500/- plus the amounts that would have been payable if the License had originally been issued in the amended form deducting the fee originally paid for the License.

(4) An application for the amendment of the License shall be dealt with by the licensing authority in the same manner as an application for grant of a License

57. Procedure for transfer of licensee in case of death of licensee

(1) If a Licensee dies, his heir or legal representative shall, within two months from the date of the death of the License, make an application to the licensing authority in **Form XIII** for the transfer of the License in his name.

(2) The licensing authority shall, if approves of the transfer, enter the license under his digital signature an endorsement to the effect that the license has been transferred to the applicant.

(3) An application for the transfer of a License under this rule shall be dealt with by the licensing authority in the same manner as an application for the grant of a License.

58. Single License for more than one beedi and cigar establishment in Andhra Pradesh –

(1) The beedi and cigar establishment opting for a single license under section 74, for engaging labour in more than one Beedi and cigar establishments located in various locations in Andhra Pradesh, shall apply electronically on the online portal of Labour Department, in **Form-XIII** to the licensing authority as notified by the State Government under sub- section (1) of section 119 of this code along with the cumulative license fees of each establishment involved therein.

(2) All the provisions of rules 50 to 58 shall apply mutatis mutandis in case of the single license granted under sub-rule (1)

(3) License issued under this rule shall be valid for five years

59.Permission to work by employees outside industrial premises under Section 76:-

(1) The employer on behalf of the employees, engaged in wetting or cutting of beedi or tobacco leaves outside the industrial premises shall apply to the licensing authority in the labour department web portal.

The licensing authority on receipt of the application through online by considering the following may issue permission through online within seven (7) days from the date of receipt of application.

(i) The employer who applies for the above permission shall have valid

license issued under section 74 for such premises.

(ii) The suitability of the place where it is proposed to be used for wetting or cutting of beedi or tobacco leaves.

(iii) Wetting or cutting of beedi or tobacco leaves shall be carried on only in that place where permission is granted.

(iv) The total number of employees employed by the employer for wetting or cutting of beedi or tobacco leaves outside the industrial premises shall not exceed the total number of workers for which issued under section 74.

(v) The licensing authority may, in addition to the foregoing terms and conditions, determine and specify in the permission such other terms and conditions, in individual cases as it may deem necessary.

(2) The employer shall maintain the record of the work permitted under sub-rule (1) to be carried outside the individual premises in **Form XIX.**

AUDIO-VISUAL WORKER

60:Agreement for audio visual workers under clause (a) of sub section (2) of section.66

(1)The form of agreement for the audio-visual worker with the producer is given in Form –XVI.

(2)The agreement shall be registered with the competent authority as may be notified by the State Government.

(3)A copy of the agreement shall also be uploaded on the labour department portal or any other official portal of the labour department.

(4)A copy of the agreement shall also be uploaded on the labour department portal or any other official portal of the labour department.

61:Procedure for reference of disputes to a conciliation officer or a tribunal under sub-section.(1) of section.66::-

The procedure for reference of the dispute to a conciliation officer or tribunal shall be in conformity of the industrial relation, code 2020 and rules framed there under.

CHAPTER-XII

FACTORIES

62. Rules prescribed under sub section 1(a)&1(b) of section 79:

(1)Approval of site, construction or extension of a factory

(i) In the case of any factory where,

(a) any hazardous process of the nature specified in the First Schedule of the Code is proposed to be carried on whether or not with the aid of power and

notwithstanding that the number of persons employed is less than any number specified in section 2(w) of the Code ; or

(b) the installed power is proposed to be or extended to be more than 30 H.P.;

No site shall be used for situating a factory nor shall any building in a factory be constructed, extended or taken into use as a factory or part of a factory and no machine, or plant or any permanent fixture shall be installed or fixed, nor shall any manufacturing process be carried on in any factory or part of a factory, unless the occupier or the owner of the factory obtains the previous permission in writing approving the plans from the Chief Inspector-cum-Facilitator.

(ii) The owner or occupier of every factory falling under sub-rule (i) may, send to the Chief Inspector-cum-Facilitator, an application in the format as made available in the online Single Desk Portal along with Plans, required particulars and scrutiny fee paid online as detailed below:

(a) Site plan drawn to a scale of 1:400 or 800 or1200 and duly showing the details of neighborhood of the premises, location of all buildings/ sheds, plant and machinery, storages, Internal roads, set-backs in the premises and North direction etc.

(b) Detailed plans (Plan, elevation and sectional views) drawn to a scale of 1:100 showing the proposed factory sheds/ buildings, Material of construction, layout of plant and machinery with HP particulars, storages, Provision for Ventilation, Illumination, Means of escape etc.

(c) a flow chart and description of the manufacturing process

(d) If hazardous process is involved, the details of the chemicals used and their MSDS, Appropriate Risk assessment reports, arrangements proposed for effective removal of dust, fumes, gases and disposal of trade wastes and effluents etc

(e) Plan scrutiny fee shall be paid online as given below

Sl.No	Maximum Installed Horse Power	Amount
1	Upto 100 HP	Rs. 500/-
2	101 HP to 500 HP	Rs. 1,500/-
3	501 HP to 1500 HP	Rs. 3,000/-
4	1501 HP to10000 HP	Rs. 75,000/-
5	10001 HP to 20000 HP	Rs. 10,000/-
6	Above 20000 HP	Rs 15,000/-

(iii) The plans shall be got prepared by a qualified draftsman duly reflecting the compliance of various requirements intended for serving the interest of Safety, Health and Welfare of the workers under this code. If the draftsmen are empanelled for this purpose through a scheme notified by the state Government for this purpose, the plans shall be got prepared only by such empanelled draftsman.

(iv) The plans which are prepared using CAD and converted into PDF shall only be uploaded in to the Single Desk portal or any other portal if notified by State Government for seeking approval of plans.

(v) If the Chief Inspector-cum-Facilitator is satisfied that the plans sent under sub-rule(ii) are in accordance with the requirements of the Code, he shall accord the approval ONLINE within 7 working days after the date of receipt of the plans.

(vi) If the Chief Inspector-cum-Facilitator is of the opinion that the plans sent under sub-rule (ii) are not in accordance with the requirements of the Code or if he finds it fit or expedient to do so, reject the permission applied and inform the same to the applicant ONLINE.

(vii) If no order is communicated to the applicant within Seven (7) days after the date on which the application has been received ONLINE, the permission applied shall be deemed to have been granted.

(viii) For the purposes of this rule, for computing the quantity of power, the power for the plant, machinery used in the manufacturing process, or the installed horse power of any captive generation of power, whichever is higher, shall be taken into account and no account shall be taken of the power for lighting, or for any office equipment or appliances or any stand by captive generation of power.

(ix) In the case of any factory not covered by sub-rule (i)(a) or (i)(b) of this rule, the Government or the Chief Inspector-cum-Facilitator may, having regard to any special circumstances in any particular existing or proposed factory, by order, require the owner or occupier to submit the particulars and plans of the factory ONLINE within thirty (30) days of the service of the order and they shall be dealt as prescribed in subrule(iii) or (iv) above.

(2) No manufacturing process shall be carried on in any factory which is not in accordance with the plans approved by Chief Inspector cum Facilitator

63. Rules prescribed under sub section1(c) of section 79:

(1) Grant of license for a factory:

(i) No premises shall be used as factory nor any manufacturing process carried on in any factory except under, and in accordance with, the license granted under these rules.

(ii) The occupier of every factory shall, before commencing any manufacturing process in any factory, apply online to the Licensing Authority in the Form as may be required on the Single Desk Portal or any other portal if notified by State

Government for grant of license, along with the annual license fee as prescribed in the Schedule below.

Provided that if the manufacturing process is commenced in any factory without making the application for grant of license as aforesaid, the person determined by the Inspector cum Facilitator based on the material available with him with regard to the person having ultimate control over the affairs of the factory shall be deemed to be the occupier under this code till the license is granted in the manner prescribed in this sub rule.

,Provided further that for computing the quantity of power, for the purposes of this rule, the power for the plant and machinery used in the manufacturing process only shall be taken into account and no account shall be taken of the power for lighting, or for any office equipment or appliances. The total installed horse power of plant, Machinery and equipment or the captive generation of power whichever is higher shall be taken into consideration.

(iii) The concerned licensing authority shall, if the application is found in order or soon after the information called for if any is received, either grant the license online in **Form-A,** subject to the conditions if deemed fit to impose or reject the grant of license duly recording the reasons therein within the stipulated time as provided in the online portal. Provided further that if no order is communicated to the applicant within a period of Seven days from the date on which the applicant has sent the application online under sub-rule (i), the license shall be deemed to have been granted and thereupon the license shall be issued forthwith.

(iv) The License granted shall be valid till it is duly cancelled.

(v) The occupier can choose the licensing period either at the time applying for grant of license or later, for a block period of one calendar year or for multiples of calendar years up to a maximum of ten (10) calendar years, by remitting the sufficient fee in multiples of annual fee with the number of calendar years chosen. The license in such cases shall be granted for the applied block period.

(vi) The granted License is valid for the calendar year or for the block period not exceeding ten (10) years for which sufficient fee is remitted. No renewal is required for license and the validity of license shall be deemed extended for the block period for which sufficient fee is remitted on or before the date of expiry of the validity of the license in force.

(vii) The factory shall be deemed to have been fully licensed from the date of receipt of the application for grant of License referred to in sub-rule (i), until the concerned Licensing Authority has either called for missing information or refused to grant the license.

(viii) No manufacturing process shall be carried on in any factory without holding a valid license.

(ix) A license granted shall be caused to be produced on demand by the Inspector-cum-Facilitator.

(2) Payment of late fee:

(i) If the prescribed annual license (2%) fee is not fully paid within the prescribed period in sub-rule (1), simple interest at two percent per month or part of a month shall be payable on the part of the fee not paid from the first day of the calendar year till the last day of the calendar month in which the fee together with interest is paid.

(ii) The Chief Inspector-cum-Facilitator may, if satisfied that there is sufficient reason for the non-payment of the annual license fee within the time prescribed in sub-rule (1), by order in writing, waive the interest specified.

Provided further that the Chief Inspector-cum-Facilitator may waive the license fee and the interest thereon if it is shown to his satisfaction that no manufacturing process has been carried on in the factory on any day of the relevant calendar year.

(3) Amendment of license:

(i) The occupier or the owner of a factory shall, within thirty (30) days of the occurrence of any change of name, or in the particulars of the maximum horse power installed or maximum number of persons employed, send to the Inspector-cum-Facilitator an application online for the amendment of the original license stating the nature of the amendment to be made and the reasons therefore together with the fee prescribed.

(ii) The fee for the amendment of a license shall be the amount, if any, by which the fee that would have been payable if the license had originally been issued in the amended form exceeds the license fee payable for the relevant calendar year but for the amendment, along with an amendment fee of **Rs.500/-** (Rupees five hundred only)

(4) Transfer of license:

(i) A license may be transferred from one occupier to another consequent to any transfer of the factory and the transferee shall send to the Inspector-cum-Facilitator an application online in the form as required on the portal along with Transfer Fee of Rs.500/- and the documentary evidences for establishing the change. The licensing authority shall, with due consideration of the factual material available with him in the application, either approve the transfer or reject the same online duly recording the reasons therein within a period of Seven days from the date of application.

(ii) During the period from the day on which the occupier on record ceased to exercise the ultimate control over the affairs of the factory for any reason, till the date on which the application for transfer on the name of incoming occupier is received in manner prescribed vide sub rule (i) above and during the period from the day on which the application for grant of license has been rejected in the manner prescribed vide sub rule(i) above till the day a revised application for transfer of License is received online as aforesaid, the Inspector cum Facilitator shall determine the occupier based on the factual material available with him with respect to the person having the ultimate control over the affairs of the factory and such person shall be deemed to be the occupier under the Code for that period.

(5) Cancellation of License:

(i) The Inspector-cum-Facilitator may, by a speaking order served on the occupier, cancel any license issued if the annual license fee, together with interest if required, has not been paid.

(ii) The Inspector-cum-Facilitator, may by a speaking order served on the occupier, cancel a license if an application has been made for such cancellation by the occupier.

(iii) The Inspector-cum-Facilitator may, with previous approval of Chief Inspector cum Facilitator in this regard, by a speaking order served on the occupier, cancel a license if the occupier is found contravening the sub-section (5) of section 84 of the code or the rules made there under.

Provided that the cancellation of the registration of the factory under Rule5(4)(ii) shall automatically renders the license granted under the sub rule (1) cancelled.

(6) Procedure on death or disability of licensee:

If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the license during such time as may reasonably be required to allow him to make an application ONLINE for the amendment of the license under Rule 2 in his own name for the unexpired portion of the original license.

(7)Issue of Duplicate License:

(i) Where a license granted under these rules is lost or accidentally destroyed, a duplicate may be downloaded online.

(iii) (ii) A Duplicate license may also be issued by Inspector-cum-Facilitator having jurisdiction over the area if the factory license wasoriginally obtained physically with online payment of Rupees Rs500/-(Rupees five hundred only)

(8). Payment of Fee:

(i) Every application under these rules for which a fee has been prescribed shall be made online and the appropriate fee has to be paid online into the local treasury under the head of account 0230 Labour and Employment 104 Receipts under Labour Laws-Fees realized under the Occupational Safety, Health and Working Conditions Code, 2020.

SCHEDULE													
Maximum number of persons to be employed on any day during the year													
Quantity of MaxH.P/K. WInstalled	**20**	**50**	**100**	**150**	**250**	**500**	**1000**	**1500**	**2000**	**3000**	**5000**	**10000**	**above10000**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Amount of Annual License fee to be paid in Rupees													
Nil	**1000**	**1800**	**3600**	**4800**	**9600**	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**

20/15	**1800**	**3600**	**4800**	**9600**	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**
50/37	**3600**	**4800**	**9600**	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**
100/75	**4800**	**9600**	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**
150/112	**9600**	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**
250/186	**12000**	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**
500/373	**18000**	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**
1000/746	**24000**	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**
1500/1119	**30000**	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**
2000/1492	**36000**	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**	**195000**
3000/2238	**42000**	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**	**195000**	**250000**
5000/3730	**51000**	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**	**195000**	**250000**	**325000**
10000/7460	**63000**	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**	**195000**	**250000**	**325000**	**400000**
Above10000	**72000**	**81000**	**90000**	**105000**	**120000**	**135000**	**150000**	**165000**	**195000**	**250000**	**325000**	**400000**	**500000**

64. Liability of owner of the premises under section 80:

The owner of the premises and the occupiers of the factories utilizing common facilities shall be liable for the contraventions of the provisions of this Code which shall include the following-

(1) Where in only vacant separate plots are leased out to different factories, the owner of the premises shall be responsible for provision and maintenance of common roads with lighting for access of appropriate width sufficient for normal and emergency operations, drainage, water supply and sanitation.

(2) Where in separate independent buildings/sheds or part of the buildings/sheds are leased to different occupiers for use as separate factories, the owner of the premises shall be responsible for the provision and maintenance of common facilities such as common roads with lighting of appropriate width sufficient for normal and emergency operations, approach roads affording access independent to each leased portion without interfering into another leased portion, drainage, water supply, lighting and sanitation. The owner shall be responsible for compliance of the requirements like structural stability, Fire Hydrant systems, Emergency Response systems Ventilation, Lighting, Latrines,Urinals, facilities for the buildings /sheds or parts thereof which are leased out as separate factories. Any occupier who takes a premise which is not complying with these requirements on lease, shall be jointly and severally responsible for the noncompliance besides the owner of the premises.

(3) Wherein a separate floors or part of floors are leased out as sperate factories, the owner shall be responsible for sufficient access and escape, structural stability, Fire Hydrant systems, Emergency Response systems, Ventilation, Lighting, Latrines, Urinals, washing facilities for the total employment of persons in the entire building by considering it as a single factory.

(4) The owner, in case of sub rules (2) & (3) above, shall be responsible for provision

and maintenance of common Facilities like Creche, Rest Rooms, Canteens, Health centers for the Health and welfare of the total persons to be employed. While designing the common facilities due care shall be taken to comply with statutory norms prescribed in this regard in the code by considering the entire premises of the owner as single factory.

Provided that for the purpose of computing the total number of persons employed in entire premises of the owner, the number of persons employed in factories wherein the provision of the any of above welfare amenities is mandatory under this code and the occupiers of those factories have explicitly undertaken in the lease deed to provide the welfare amenities as applicable under the code, then those number of persons can be excluded for the purpose of that particular welfare amenity.

Provided further that if an occupier of any factory acquiring a premise on lease from its owner, has explicitly undertaken in the lease deed about the provision welfare amenities applicable to him in his premises for his workers and employees, the owner shall be relieved from his joint responsibility to that extent with respect to that particular factory. The occupier of the factory, in such a case, shall be severally responsible for any noncompliance in this regard.

(5) Wherein any premises as stated vide sub-rule(ii) and sub-rule(iii) above has been leased out by owner to an occupier of a factory with preinstalled plant , Machinery and equipment for use as a factory, then owner and Occupier shall be jointly and severally responsible for provision and maintenance of appropriate safety arrangements with respect to the plant, machinery and equipment which shall include Design and layout, fencing of machinery and plant, Preventive maintenance of plant, Machinery and equipment, safe means of access to all work places, precautions in case of fire, Effective arrangements for collection and disposal of dust , vapour or fumes at source, Cleanliness of staircases and common passages etc;

(6) No owner shall lease out his premises for the purpose of situating factories and no occupier of factory shall take on lease a premise for situating his factory otherwise than in the manner prescribed above. The owner and Occupiers are jointly and severally responsible for any contravention in this regard.

Rules prescribed under section 82:

65. Dangerous operations:

i. The following operations when carried on in any factory are declared to be dangerous operations under section 82:

(I) Manufacture of aerated waters and other bottling processes.
(II) Phosphating, Electrolytic plating or oxidation of metal articles by use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.
(III) Manufacture and repair of Electric Accumulators
(IV) Glass manufacture
(V) Grinding or glazing of metals and processes incidental thereto
(VI) Manufacture and treatment of Lead and certain compounds of

Lead

(VII) Generation of gas from dangerous petroleum

(VIII) Cleaning Smoothing Roughening etc., of articles by a jet of sand metal shot or grit or other abrasive propelled by a blast of compressed air or steam

(IX) Liming and Tanning of raw hides and skins, Wet Leather finishing and processes incidental thereto

(X) Processing of Rubber and plastic compounds

(XI) Graphite Powdering

(XII) Printing Press And Type Foundries - Certain Lead process carried on therein

(XIII) Cashew nut processing.

(XIV) Pottery

(XV) Chemical Works

(XVI) Compression of Oxygen and Hydrogen produced by the electrolysis of water

(XVII) Manipulation of stone or any other material containing free silica

(XVIII) Handling and processing of Asbestos, Manufacture of any article or substance of Asbestos and any other process of manufacture or otherwise in which asbestos is used in any form.

(XIX) Forging, Forming, Heat Treatment and incidental processes

(XX) Handling and manipulation of Corrosive Substances

(XXI) Manufacture or Manipulation Of Carcinogenic Dye Intermediates

(XXII) Process of Extracting Oils And Fats In Solvent Extraction Plants

(XXIII) Carbon-Disulphide Plants

(XXIV) Manufacture or manipulation of dangerous pesticides.

(XXV) Manufacture, handling and use of Benzene

(XXVI) Manufacture or Manipulation of Manganese and its Compounds

(XXVII) Operations involving High Noise and Vibration Levels

(XXVIII) Manufacture of Rayon by Viscose Process.

(XXIX) Flammable Liquefied Or Compressed Gases And Highly Flammable Liquids

(XXX) Operations in Foundries And Furnaces

(XXXI) Fire Works Manufactories and Match Factories

(XXXII) Handling and Processing of Coir Fiber

(XXXIII) Manufacturing and processing of textiles

(XXXIV) Flammable Liquefied or Compressed Gases and Highly Flammable Liquids

(XXXV) Operations in Foundries and Furnaces.

(1) The provisions specified in the schedules annexed hereto shall apply to any class or description of factories wherein dangerous operations specified in each schedule are carried out.

(2) Notwithstanding the provisions specified in the Schedules annexed to this rule, the Inspector-cum-Facilitator may by issue of orders in writing to the occupier, direct them to carry out such measures, and within such time, as may be specified in such order with a view to remove conditions dangerous to the health and safety of the persons employed or to suspend any process, where such process constitutes, in the opinion of the Inspector-cum-Facilitator, imminent danger of poisoning or toxicity for a maximum period of three (3) days after which it has to be extended by the chief Inspector cum Facilitator till the said imminent danger is removed or appropriate corrective steps are taken.

(3) Any register or record of medical examinations and tests connected therewith required to be carried out under any of the schedules annexed hereto in respect of any worker shall be kept readily available to the Inspector-cum-Facilitator and shall be preserved till the expiry of one (1) years after the worker ceases to be in employment of the factory.

(4) First employment' means employment for the first time in a process or operation so notified under section 82, or re-employment therein after cessation of employment in such process or operation for a period exceeding three (3) calendar months.

SCHEDULE- I

MANUFACTURE OF AERATED WATERS AND OTHER BOTTLING PROCESSES

1. Fencing of machines

All machines for filling bottles or syphons shall be so constructed, placed or fenced as to prevent at far as may be practicable, a fragment of a bursting bottle or syphon from striking any person employed in the factory.

2. Face-guards and gauntlets

(1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or siphons

(a) suitable face-guards to protect the face, neck and throat, and

(b) suitable gauntlets for both arms to protect the whole hands and arms :

Provided that --

(i) paragraph 2 (1) shall not apply where bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape, and

(ii) where a machine is so constructed that only one arm of the bottle at work upon it is exposed to danger, a gauntlet

(2) The occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, screwing, wiring, foiling, capsuling, sighting handling or labeling bottles or syphons—

(a) suitable face-guards to protect the face, neck and throat, and

(b) suitable gauntlets for both arms to protect the arm and atleast half of the palm and the space between the thumb and forefinger.

(3) Wearing of face-guards and gauntlets

All persons engaged in any of the processes specified in paragraph (2) shall, while at work in such processes, wear the faceguards and gauntlets provided under the provisions of the said paragraph.

SCHEDULE- II

PHOSPHATING, ELECTROLYTIC PLATING OR OXIDATION OF METAL ARTICLES BY USE OF AN ELECTROLYTE CONTAINING ACIDS, BASES OR SALTS OF METALS SUCH AS CHROMIUM, NICKEL, CADMIUM, ZINC, COPPER, SILVER, GOLD ETC.

1. **Application**

The provisions of this schedule shall apply to all factories in which Phosphating, Electrolytic plating or oxidation of metal articles is carried on.

2. **Definitions**

For the purposes of this schedule

(a) "electrolytic process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold, etc.

(b) "Phosphating process" means a chemical process for the surface treatment wherein soluble metal phosphate layers are formed.

(c) "bath" means any vessel used for an electrolytic process or for any subsequent process.

3. Exhaust draught

An efficient exhaust draught shall be provided by mechanical means and shall operate on the vapour or spray given off in the process as near as may be at the point of origin. The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.

4. Floor or workrooms

The floor of every workroom containing a bath shall be impervious to water. The

floor shall be maintained in good and level condition and shall be washed down at least once a day.

5. Protective devices

(1) The occupier shall provide and maintain in good and clean condition the following articles of protective devices for the use of all persons employed on any process and such devices shall be worn by the persons concerned.

(a) water proof aprons and bibs;

(b) for persons actually working at a bath, loose- fitting rubber gloves and rubber boots or other waterproof footwear, and chemical goggles; and

(c) suitable and efficient respirator.

(2) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and drying of protective devices.

6. Water facilities

(1) There shall be provided and maintained in good repairs for the use of all persons employed in electrolytic process and processes incidental to it

(a) a wash place under cover, with either

(b) a trough with a smooth impervious surface fitted with a waste pipe, and of sufficient length to allow at least 60 cms. for every 5 persons employed at any one time, and having a constant supply of water from taps or jets above the trough intervals of not more than 60 cms; or

(c)at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and having a constant supply of water laid on;

(b) a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.

(2) In addition to the facility in sub-paragraph (1) an approved type of emergency shower with eye fountain shall be provided and maintained in good working order. Wherever necessary, in order to ensure continuous water supply, storage tank of 1,500 liters capacity shall be provided as a source of clean water for emergency use.

7. Cautionary placard

A cautionary placard in the form specified below and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

CAUTIONARY NOTICE

1. Chemicals handled in this plant are corrosive and poisonous.
2. Smoking, chewing tobacco, eating food or drinking, in this area is prohibited. No food stuff or drink shall be brought in this area.

3. Some of these chemicals maybe absorbed through the skin and may cause poisoning.
4. A good wash shall be taken before meals.
5. Protective devices supplied shall be used while working in this area.
6. Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water.
7. All workers shall report for the prescribed medical tests regularly to protect their own health.

8. Medical facilities and records of examinations and tests

(1) The occupier shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a) ; and

(c) maintain a sufficient supply of suitable barrier cream, ointment and impermeable water proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping these substances. In case cyanides are used in the bath, the box shall also contain an emergency cyanide kit.

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) Such examination shall include X-ray of the chest and

(a) in case of chromium plating, include examination for nasal septum perforation and test for chromium in urine

(b) in case of nickel plating, test for nickel in urine; and

(c) in case of cadmium plating, test for cadmium in urine and -2 microlobulin in urine.

(4) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(5) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(6) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(7) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(8) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- III

MANUFACTURE AND REPAIR OF ELECTRIC ACCUMULATORS

1. Savings

This Schedule shall not apply to the manufacture or repair of electric accumulators or parts thereof not containing lead or any compound of lead; or to the repair on the premises, of any accumulator forming part of a stationary battery.

2. Definitions

For the purposes of this schedule

(a) "Lead process" means the melting of lead or any materials containing lead, casting, pasting, lead burning, or any other work, including trimming, or any other abrading or cutting of pasted plates, involving the use, movement or manipulation of, or contact with, any oxide of lead.

(b) "Manipulation of raw oxide of lead" means any lead process involving any manipulation or movement of raw oxides of lead other than its conveyance

in a receptacle or by means of an implement from one operation to another.

3. Separation of certain processes

Each of the following processes shall be carried on in such a manner under such conditions as to secure effectual separation from one another, and from any other process;

(a) Manipulation of raw oxide of lead;

(b) Pasting;

(c) Drying of pasted plates;

(d) Formation with lead burning ("tacking") necessarily carried on in connection therewith;

(e) Melting down of pasted plates.

4. Air-space

In every room in which a lead process is carried on, there shall be at least 14.2 cubic meters of air space for each person employed therein, and in computing this air space no height over 3.7 meters shall be taken into account.

5. Ventilation

Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.

6. Distance between workers in pasting room

In every pasting room the distance between the centre of the working position of any paster and that of the paster working nearest to him shall not be less than 1.5 meters.

7. Floor of work-rooms

(1) The floor of every room in which a lead process is carried on shall be

(a) of cement or similar material so as to be smooth and impervious to water;

(b) maintained in sound condition;

(c) kept free from materials, plant, or other obstruction not required for, or produced is the process carried on in the room.

(2) In all such rooms other than grid casting shops the floor shall be cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

(3) In grid casting shop the floor shall be cleansed daily.

(4) Without prejudice to the requirements of sub- paragraphs (1), (2) and (3) where manipulation of raw oxide of lead or pasting is carried on, the floor shall also be

(a) kept constantly moist while work is being done;

(b) provided with suitable and adequate arrangements for drainage ;

(c) Thoroughly washed daily by means of a hose pipe.

8. **Work-benches**

The work benches at which any lead process is carried on shall

(i) have a smooth surface and be maintained in sound condition;

(ii) be kept free from all materials or plant not required for, or produced in, the process carried on thereat; and all such work-benches other than those in grid casting shops shall

(iii) be cleaned daily either after being thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat; and, all such work-benches in grid casting shops shall

(iv) be cleansed daily; and every work-bench used for pasting shall

(v) be covered throughout with sheet lead or other impervious material;

(vi) be provided with raised edges;

(vii) be kept constantly moist while pasting is being carried on.

9. Exhaust draught

The following processes shall not be carried on without the use of an efficient exhaust draught;

(a) Melting of lead or materials containing lead.

(b) Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust into the workroom.

(c) Pasting

(d) Trimming, brushing, filing or any other abrading or cutting of pasted plates giving rise to dust.

(e) Lead burning, other than

(i) "tacking" in the formation room;

(ii) chemical burning for the making of lead linings for cell cases necessarily carried on in such a manner, that the application of efficient exhaust is impracticable.

Such exhaust draught shall be effected by mechanical means and shall operate on the dust or fume given off as nearly as maybe at its point of origin, so as to prevent its entering the air of any room in which persons work.

10. Fumes and gases from melting pots

The products of combustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work.

11. Container for dross

A suitable receptacle with tightly fitting cover shall be provided and used for dross as

it is removed from every melting pot. Such receptacle shall be kept covered while in the workroom, except when dross is being deposited therein.

12. Container for lead waste

A suitable receptacle shall be provided in every workroom in which old plates and waste material which may give rise to dust shall be deposited.

13. Racks or shelves in drying room

The racks or shelves provided in any drying room shall not be more than 2.4 meters from the floor not more than 61 centimeters in width: provided that as regards racks or shelves set or drawn from both sides the total width shall not exceed 1.2 meters. Such racks or shelves shall be cleansed only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.

14. Medical facilities and records of examinations and tests

(1) The occupier of every factory in which manufacture and repair of electric accumulators is carried on shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a) ; and

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii)Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) Such examination shall include tests for lead in urine and blood. ALA in urine, hemoglobin content stippling of cells and steadiness test.

(4) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(5) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(6) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(7) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(8) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

15. Protective clothing

Protective clothing shall be provided and maintained in good repair for all persons employed in

(a) Manipulation of raw oxide of lead;

(b) pasting;

(c) the formation room ;

and such clothing shall be worn by the persons concerned. The protective clothing shall consist of a waterproof apron and waterproof footwear; and, also as regards persons employed in the manipulation of raw oxide of lead or in pasting, head coverings. The head coverings shall be washed daily.

16. Mess-room

There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room which shall be furnished with (a) sufficient tables and benches, and (b) adequate means for warming food.

The mess-room shall be placed under the charge of a responsible person, and shall be kept clean.

17. Clock-room

There shall be provided and maintained for the use of all persons employed in a lead process

(a) A clock-room for clothing put off during working hours with adequate

arrangements for drying the clothing if wet. Such accommodation shall be separate from any mess-room.

(b) Separate and suitable arrangements for the storage of protective clothing provided under paragraph 16.

18. Washing facilities

There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process

(a) A wash place under cover, with either

(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of at least 61 centimeters for every five (5) such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 61 centimeters ; or

(ii) at least one wash basin for every live such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water laid on;

(iii) a sufficient supply of clean towels made of suitable materials renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel for each such worker ; and

(iv) a sufficient supply of soap or other suitable cleansing material and of nail brushes.

(b) There shall in addition be provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector-cum-Facilitator.

19. Time to be allowed for washing

Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person who has been employed in the manipulation of raw oxide of lead or in pasting:

Provided that if there be one basin or 61 centimeters of trough for each such person this rule shall not apply.

20. Facilities for bathing

Sufficient bath accommodation to the satisfaction of the Chief Inspector-cum-Facilitator shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting, and a sufficient supply of soap and clean towels.

21. Food, drinks, etc., prohibited in workrooms

No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any workroom in which any lead process is carried on.

SCHEDULE -IV

GLASS MANUFACTURE

1. Definitions

For the purpose of this schedule

(a) "Efficient exhaust draught" means localized ventilation effected by mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originate.

(b) "Lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid a quantity of soluble lead com-pound exceeding when calculated as lead monoxide, 5 percent of the dry weight of the portion taken for analysis.

The method of treatment shall be as follows:

A weighed quantity of the material which has been dried at 100oC and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 percent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate.

2. Exhaust draught

The following processes shall not be carried -on except under an efficient exhaust draught or under such other conditions as may be approved by the Chief Inspector-cum-Facilitator:

(a) The mixing of raw materials to form a "batch".

(b) The dry grinding, glazing and polishing of glass or any article of glass.

(c) All processes in which hydrofluoric acid fumes or ammonical vapors are given off.

(d) All processes in the making of furnace moulds or "pots" including the grinding or crushing of used "pots"

(e) All processes involving the use of a dry lead compound.

(f) All furnaces, heating ovens and driers.

(g) All machineries involving the secondary processing on glass material

3. Floors and work-benches

The floor and work- benches of every room in which a dry compound of lead is

manipulated or in which any process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements

The floor shall be --

(a) of cement or similar material so as to be smooth and impervious to water ;

(b) maintained in sound conditions ; and

(c) cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

The work-benches shall —

(a) have a smooth surface and be maintained in sound condition, and

(b) be cleansed daily either after being thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat.

4. Use of Hydrofluoric Acid

The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid:

(a) There shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room

(b) the floor shall be covered with gutta-percha and be tight and shall slope gently down to a covered drain;

(c) the work places shall be so enclosed in projecting hoods that openings required for bringing in the objects to be treated shall be as small as practicable ; and

(d) the efficient exhaust draught shall be so contrived that the gases are exhausted downwards.

5. Storage and transport of Hydrofluoric acid

Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or rubber.

6. Suitable facilities shall be readily available for sterilizing the blow-pipes used by the glass blowers and such blow-pipes shall be sterilized at the beginning of the operations of blowing, each day.

7. Work near furnaces

(i) No person shall carry out any work near furnace within the distance dangerous to the health and safety.

(ii) All precautions shall be taken to prevent de-hydration to the workers employed near-by.

8. **Provision of safety arrangements**

(i) Suitable interlock arrangement shall be provided and maintained in all the machines so as to ensure the safety of persons employed therein.

(ii) No process or work shall be carried on in such a manner as to cause risk of bodily injury to the persons employed.

9. Food, drinks, etc., prohibited in workrooms

No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or work place wherein any process specified in paragraph 3 is carried on.

10. Protective clothing

The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all persons employed in the processes specified in paragraph 3 suitable protective clothing, footwear and goggles according to the nature of the work and such clothing, footwear, etc., shall be worn by the persons concerned.

11. Washing facilities

There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the processes specified in paragraph 3

(a) a wash place with either

(i) a trough with a smooth impervious surface fitted with a waste pipe, without plug and of sufficient length to allow of at least 61 centimeters for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 61 centimeters ; or

(ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available ; and

a sufficient supply of clean towels made of suitable materials renewed daily with a sufficient supply of soap or other suitable cleansing material and of nail brushes ; and

(b) a sufficient number of stand pipes with taps - the number and location of such stand pipes shall be to the satisfaction of the Chief Inspector-cum-Facilitator.

12. Medical facilities and record of examinations and tests

(1) The Occupier of every factory in which glass manufacturing processes are carried out, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a) ; and

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

i. Once before employment, to ascertain the physical fitness of the person to do the particular job:

ii. Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (3) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- V

GRINDING OR GLAZING OF METALS AND PROCESSES INCIDENTAL THERETO

1. Definitions

For the purposes of this schedule

(a) "Grindstone" means a grindstone composed of natural or manufactured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted.

(b) "Abrasive wheel' means a wheel manufactured of bonded emery or similar abrasive.

(c) "Grinding" means the abrasion, by aid of mechanical power of metal, by means of a grindstone or abrasive wheel.

(d) "Glazing" means the abrading, polishing or finishing by aid of mechanical power of metal, by means of any wheel, buff mop or similar appliance to which any abrading or polishing substance is attached or applied.

(e) "Racing" means the turning up, cutting or dressing of a revolving grindstone before it is brought into use for the first time.

(f) "Hacking" means the chipping of the surface of a grindstone by a hack or similar tool.

(g) "Rodding" means the dressing of the surface of a revolving grindstone by the application of rod, bar or strip of metal to such surface.

2. Safety precautions regarding grinding and glazing machinery

(1) All collars, set screws, shafts, couplings, clutches, keys, pulleys, keys and belts in polishing and grinding machines shall be effectively guarded.

(2)

(i) Defective wheels shall not be used.

(ii) Grinding wheels shall fit freely on their spindles. They shall never be forced on, nor shall they be let loose on spindles.

(iii) The soft metal bushings at the centre shall not extend beyond the sides of the wheels. Wheels shall be kept as true as practicable and work rests shall be kept adjusted close to wheels.

(iv) Wherever possible a compressible medium such as blotting paper, rubber or similar material, at least as large III diameter as that of the flanges, shall be fitted between a wheel and each of its flanges.

(v) Projecting arbor ends of grinding and polishing wheels shall be effectively guarded.

(3) Every emery or abrasive wheel shall be provided with a strong iron cover guard that shall enclose the wheel as far as practicable to retain fragments in the event of bursting. The guard shall be securely attached to the frame of the machine or other solid foundation.

(4) Wheels shall not be operated at a speed in excess of that which is recommended by the manufacturer.

3. Equipment for removal of dust

No racing, dry grinding or glazing shall be performed without

(a) a hood or other appliance so constructed, arranged, placed, and maintained as substantially to intercept the dust thrown off;

(b) a duct of adequate size, air-tight and so arranged as to be capable of carrying away the dust, which dust shall be kept free from obstruction and shall be provided with proper means of access for inspection and cleaning, and where practicable, with a connection at the end remote from the fan to enable the Inspector-cum-Facilitator to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and

(c) a fan or other efficient means of producing a draught sufficient to extract the dust :

Provided that the Chief Inspector-cum-Facilitator may accept any other appliance that is, in his opinion, as effectual for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.

4. Restriction on employment on grinding operations

Not more than one person shall at any time perform the actual process of grinding, or glazing upon a grindstone, abrasive wheel or glazing appliance:

Provided that this paragraph shall not prohibit the employment of persons to assist in the manipulation of heavy or bulky articles at any such grindstone, abrasive wheel or glazing appliance.

5. Glazing

Glazing or other processes, except processes incidental to wet grinding upon a grindstone shall not be carried on in any room in which wet grinding upon a grindstone is done.

6. Hacking and rodding

Hacking or rodding shall not be done unless during the process either (a) an adequate supply of water is laid on at the upper surface of the grindstone or (b) adequate appliances for the interception of dust are provided in accordance with the requirements of paragraph 3.

7. Examination of dust equipment

(a) All equipment for the extraction or suppression of dust shall at least once in every six (6) months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

(b) A register containing particulars of such examination and test shall be kept in Form No. EDE

8. Personnel Protective Equipment :-

The occupier of every factory to which this schedule applies shall provide to workers personnel protective equipments such as breathing apparatus, hand gloves, shoes, helmets, goggles, earplug, aprons, etc, as per the relevant standard prescribed by the Bureau of Indian Standards and maintained in good conditions for use of every person employed.

9. Medical facilities and record of examinations and tests

(1) The occupier of every factory in which grinding or glazing of metals are carried out, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a) ; and

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be

employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE -VI

MANUFACTURE AND TREATMENT OF LEAD AND CERTAIN COMPOUNDS OF LEAD

1. Definitions

For the purposes of this schedule

(a) "Lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid, a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five percent (5%) of the dry weight of the portion taken for analysis. In the case of paints and similar products and other mixtures containing oil or fat the "dry weight" means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media.

The method of treatment shall be as follows:

A weighed quantity of the material which has been dried at 100°C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent. by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear liberate shall then be precipitated as lead sulphide and weighed as lead sulphate.

(b) "Efficient exhaust draught" means localized ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fumes or dust originate.

(c) “Manipulation” means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling, using, etc.

2. Application

This schedule shall apply to all factories or parts of factories in which any of the following operations are carried on:

(a) Work at a furnace where the reduction or treatment of zinc or lead ores is carried on.

(b) The manipulation, treatment or reduction of ashes containing lead, the desilverising of lead or the melting of scrap lead or zinc.

(c) The manufacture and manipulation of solder or alloys containing more than ten percent of lead.

(d) The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate, or silicate of lead.

(e) Handling or mixing of lead tetraethyl.

(f) Any other operation involving the use of a lead compound.

(g) The cleaning of workroom where any of the operations aforesaid are carried on.

3. Requirements to be observed

No person shall be employed or permitted to work in any process involving the use of lead compounds if the process is such that dust or fume from a lead compound is produced therein, or the persons employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraphs 6 to 14 are complied with.

4. Exhaust draught

Where dust, fume, gas or vapour is produced in the process, provision shall be made for removing them by means of any efficient exhaust draught so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.

5. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include for lead in blood and urine, ALA in urine, hemoglobin content, stippling of cells and steadiness tests.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in health register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

6. Food, drinks, etc., prohibited in workrooms

No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any workroom in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.

7. Protective clothing

Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the persons employed.

8. Cleanliness of workrooms, tools, etc

The rooms in which the person’s arc employed and all tools and apparatus used by them shall be kept in a clean state.

9. Washing facilities

(1) The occupier shall provide and maintain for the use of all persons employed, suitable washing facilities consisting of

(a) a trough with a smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow at least 61 centimeters for every ten persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 61 centimeters ; or

(b) atleast one wash-basin for every ten persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water, together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels.

(2) The facilities so provided shall be placed under the charge of a responsible person and shall be kept dean.

10. Mess-room or Canteen

The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking their meals. The arrangement shall consist of the use of a room separate from any workroom which shall be furnished with sufficient tables and benches and unless a canteen serving hot meals is provided, adequate means for warming food. The room shall be adequately ventilated by the circulation of fresh air shall be placed under the charge of a responsible person and shall be kept clean.

11. Cloak-room

The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

SCHEDULE -VII

GENERATION OF GAS FROM DANGEROUS PETROLEUM

1. Flame traps

The plant for generation of gas from dangerous petroleum and associated piping and fittings shall be fitted with atleast two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and all pipes and valves shall be installed and maintained free from leaks.

2. Generating building or room

All plants for generation of gas from dangerous petroleum erected after the coming into force of the provisions specified in this schedule shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as the "generating building"). In the case of such plant erected before the coming into force of the provisions specified in this schedule there shall be no direct

communication between the room where such plants are erected (hereinafter referred to as the "generating room"), and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire-resisting materials.

3. Fire Extinguishers

An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for generation of gas from dangerous petroleum.

4. Plant to be approved by the Chief Inspector-cum-Facilitator

Gas from dangerous petroleum shall not be manufactured except in a plant for generating gas from dangerous petroleum, the design and construction of which has been approved by the Chief Inspector-cum-Facilitator.

5. Escape of dangerous petroleum

Effective steps shall be taken to prevent dangerous petroleum from escaping into any drain or sewer.

6. Prohibition relating to smoking, etc.,

No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generating room or generating building or in the vicinity thereof and a warning notice in the language understood by the majority of the workers shall he pasted in the factory prohibiting smoking and the carrying of matches, fire or naked light or other means of producing a naked light or spark into such room or building.

7. Access to dangerous petroleum or container

No unauthorized person shall have access to any dangerous petroleum or to vessel containing or having actually contained (dangerous) petroleum.

8. Electric fittings

All electric fittings shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead sheathed.

9. Construction of doors

All doors in generating room or generating building shall be constructed to open outwards or to slide and no door shall be locked or obstructed or fastened in such a manner that it cannot be easily and immediately opened from the inside while gas is being generated and any person is working in the generating room or generating building.

10. Repair of containers

No vessel that has contained petroleum shall be repaired in a generating room or generating building and no repairs to any such vessel shall be undertaken unless live-steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from dangerous petroleum or inflammable vapour.

SCHEDULE -VIII

CLEANING SMOOTHING ROUGHENING ETC., OF ARTICLES BY A JET OF SAND METAL SHOT OR GRIT OR OTHER ABRASIVE PROPELLED BY A BLAST OF COMPRESSED AIR OR STEAM

1. Definitions

For the purposes of this schedule

(a) "Blasting" means cleaning, smoothing, peening, roughening or removing of any part of the surface of any article by the use as an abrasive of a jet of sand, metal shot, or grit or other material, propelled by a blast, of compressed air or steam.

(b) "Blast enclosures" means a chamber, barrel cabinet or any other enclosure designed for the performance of blasting therein.

(c) "Blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise.

(d) "Cleaning of castings", where done as an incidental or supplemental process in connection with the making of metal castings, means, the freeing of the casting from adherent sand or other substance and includes the removal of dross and the general smoothing of a casting, but does not include the free treatment.

2. Prohibition of sand blasting

Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting

3. Precautions in connection with blasting operations

(1) Blasting to be done in blasting enclosure: Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and cleaning and repairing of the enclosure including the plants and appliances situated therein, shall be performed in a blasting enclosure. Every door, aperture and joint of blasting enclosure, shall be kept closed and air-tight, while blasting is being done therein.

(2) Maintenance of blasting enclosure: Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to prevent dust escaping from such enclosures and from any apparatus connected therewith, into the air of any room.

(3) Provision of separating apparatus: There shall be provided and maintained for and in connection with every blasting enclosure, efficient apparatus for separating, so far as practicable, abrasive which has been used for blasting and which is to be used again as an abrasive, from dust or particles or other materials arising from blasting; and no such abrasive shall be introduced into any blasting apparatus and used for blasting until it has been so separated:

Provided that this clause shall not apply, except in the case of blasting chambers, to blasting enclosures constructed or installed before the coming into

force of this Schedule, if the Chief Inspector-cum-Facilitator is of the opinion that it is not reasonably practicable to provide such separating apparatus.

(4) Provision of ventilating plant: There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract, by exhaust draught effected by mechanical means, dust produced in the enclosure. The dust extracted and removed shall be disposed of by such method and in such a manner that it shall not escape into the air of any room; and every other filtering or settling device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or settling device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

(5) Operation of ventilating plant: The ventilating plant provided for the purpose of sub- clause (4) shall be kept in continuous operation wherever the blasting enclosure is in use whether or not blasting is actually taking place therein, and in the case of a blasting chamber, it shall be in operation even when any person is inside the chamber for the purpose of cleaning.

(6) No person shall be required or allowed to work in blasting enclosure unless he is provided with suitable breathing apparatus capable of continuous supply of fresh air.

(7) No process or work shall be carried on in such a manner as to cause risk of bodily injury to the persons employed.

4. Inspection and examination

(1) Every blasting enclosure shall be examined by a qualified person once in every week and specially tested by a competent person once in every six (6) months, in which it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant shall be thoroughly examined and in the case of ventilating plant, examined by a qualified person once in every month and tested by a competent person once in every six months.

(2) Particulars of the result of every such inspection, examination and test shall forthwith be entered in a register in a Form: EDE which shall be kept in a form approved by the chief Inspector-cum-Facilitator and shall be available for inspection by any workman employed in, or in connection with, blasting in the factory. Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the Occupier or other appropriate person and without prejudice to the foregoing requirements of this Schedule, shall be removed without avoidable delay.

5. Provision of protective helmets, gauntlets and overalls

(1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, whether in blasting or in any work connected

therewith or in cleaning such a chamber, protective helmets of a type approved by a certificate of the Chief Inspector-cum-Facilitator; and every such person shall wear the helmet provided for this use whilst he is in the chamber and shall not remove it until he is outside the chamber

(2) Each protective helmet shall carry a distinguishing mark indicating the person by whom if is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person and has not since be thoroughly disinfected.

(3) Each protective helmet when in use shall be supplied with clean and not unreasonably cold air at a rate of not less than 0.17 cubic meter per minute.

(4) Suitable gauntlets and overalls shall be provided for the use of all persons while performing blasting or assisting at blasting and every such person shall, while so engaged, wear the gauntlet and overall provided.

6. Precautions in connection with cleaning and other work

(1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surroundings thereof or upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk of inhaling dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation.

(2) In connection with any cleaning operation referred to in clause 5 and the removal of dust from filtering or settling devices all practicable measures shall be taken to dispose of the dust in such manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

7. Storage accommodation for protective wear

Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by clause 5 shall be provided outside, and conveniently near to, every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls when not in actual use shall be kept in this accommodation.

8. Maintenance and cleaning of protective wear

All helmets, gauntlets, overalls, and other protective devices or clothing's provided and worn for the purpose of this Schedule, shall be kept in good condition and so far as is reasonably practicable shall be cleaned on every week day in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, wherever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing.

9. Maintenance of vacuum cleaning plant

Vacuum cleaning plant used for the purpose of this Schedule shall be properly maintained.

10. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a) ; and

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(a) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(b) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health

status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- IX

LIMING AND TANNING OF RAW HIDES AND SKINS, WET LEATHER FINISHING AND PROCESSES INCIDENTAL THERETO

1. Cautionary notices

(1) Cautionary notices as to anthrax in the form specified by the Chief Inspector-cum-Facilitator shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed.

(2) A copy of a warning notice as to anthrax in the form specified by the Chief Inspector-cum-Facilitator shall be given to each person employed when he is engaged, and subsequently if still employed, on the first day of each calendar year.

(3) Cautionary notices as to the effects of chrome on the skin shall be affixed in prominent positions in every factory in which chrome solutions are used and such notices shall be so placed as to be easily and conveniently read by the persons employed.

(4) Notices shall be affixed in prominent places in the factory stating the position of the "First-aid" box or cupboard and the name of the person in charge of such box or cupboard.

(5) If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notices specified in paragraphs 1, 2, and 4 and if chrome solutions are used in the factory the contents of the notice specified in Paragraph 3.

2. Protective clothing

The occupier shall provide and maintain in good condition the following articles of protective clothing:

(a) water-proof foot-wear, leg coverings, aprons and gloves for persons employed in process involving contact with chrome solutions, including the preparation of such solution;

(b) gloves and boots for persons employed in lime-yard; and

(c) protective foot-wear, aprons and gloves for persons employed in processes involving the handling of hides or skins, other than in processes specified in clauses (a) and (b):

Provided that —

(i) the gloves, aprons, leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided under sub-clauses (a) and (b) shall be of rubber;

(ii) the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquor.

3. Precautions against dangerous fumes, gases, etc.-

(1) No person shall be required or allowed to enter any chamber, tank, vat, pit, pipe, flue or other confined space in any factory in which any gas, fume, vapour or dust is likely to be present to such an extent as to involve risk to persons being overcome thereby, unless it is provided with a manhole of adequate size or other effective means of egress.

(2) No person shall be required or allowed to enter any confined space as is referred to in sub-paragraph (1), until all practicable measures have been taken to remove any gas, fume, vapour or dust, which may be present so as to bring its level within the permissible limits and to prevent any ingress of such gas, fume, vapour or dust and unless-

(a) a certificate in writing has been given by a competent person, based on a test carried out by himself that the space is reasonably free from dangerous gas, fume, vapour or dust; or

(b) such person is wearing suitable breathing apparatus and a belt securely attached to a rope the free end of which is held by a person outside the confined space.

4. **Ventilation**

Adequate ventilation arrangements shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances could be present. These arrangements shall ensure that concentrations, which are either harmful or could result in explosion, are not permitted to be built up in the work environment.

5. Washing facilities, mess-room and cloak-room

There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed

(a) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 61 centimeters for every ten persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 61 centimeters ; or

(b) at least one wash-basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water together with, in either case, a sufficient supply of nail brushes, soap or other suitable

cleansing material, and clean towels ;

(c) a suitable mess-room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches and (2) adequate means for warming food and for boiling water.

The mess-room shall

(1) be separate from any room or shed in which hides or skins are stored, treated or manipulated,

(2) be separated from the cloak-room and

(3) be placed under the charge of a responsible person ;

(d) The occupier shall provide and maintain for the use of all persons employed, suitable accommodation for clothing put off during working hours and another accommodation for protective clothing and shall also make adequate arrangements for drying up the clothing in both the cases, if wet. The accommodation so provided shall be kept clean at all times and placed under the charge of a responsible person.

6. Food, drinks, etc., prohibited in work-rooms

No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work room or shed in which hides or skins are stored, treated or manipulated.

7. Medical facilities and records of examination and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(c) arrange for inspection of the hands of all the persons keeping in contact with the Chromium substances to be made twice a week ; and

(d) provide and maintain and supply suitable ointment and plaster in a box readily accessible to the workers and solely used for the purpose of keeping the ointment and the plaster

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(a) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(b) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by

the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- X

PROCESSING OF RUBBER AND PLASTIC COMPOUNDS

1. Application

The requirements of this schedule shall apply to factory or part thereof wherein manufacture or processing of rubber and plastic compounds is carried on.

2. Definitions:—For the purpose of this Schedule,—

(a) ‘’Processing of Rubber and plastic compounds” means breaking down, cracking, washing, grating, mixing, refining, moulding, extruding, handling, vulcanizing and warming rubber or plastic compounds;

(b) “calendar” shall mean machine with rolls used for frictioning, sheeting coating and spreading of rubber compounds and plastic or plastic compounds;

(c) “Injection moulding machine” shall mean a moulding machine wherein a heat-

softened rubber or plastic material if forced from a cylinder into a relatively cool cavity, which gives the article the desired shape.

3. Installation of machines.- Rubber and Plastic Mills shall be so installed that top of the front roll is not less than one metre above the floor or working level, provided that in existing installations where the top of the front roll is below this height, a strong rigid distance bar guard shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the roller from the normal working position of the operator.

4. Safety Devices.-

(1) (a) Rubber and Plastic Mills shall be equipped with hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls or horizontal safety-trip rods or tight wire cable across both front and rear, which will when pushed or pulled operate instantly to disconnect the power and apply the brakes or to reverse the rolls.

(b) Safety- trip rods or tight wire cable on rubber Mills shall extend across the entire length of the face of the rolls and shall be located not more than 170 centimeters above the floor or working level.

(2) (a) Calendar machines shall be equipped with horizontal safety-trip rods or tight wire across both front and rear, which will when pushed or pulled, operate instantly to disconnect the power and apply the brakes or to reverse the roll;

(b) afety-trip rods or tight wire cables on calendar machines shall extend across the entire length of the face of the rolls and shall be located not more than 170 centimeters above the floor or working level.

(c) On each side of all calendars and near both ends of the face of the rolls there shall be a vertical tight wire cable connecting with the bar tripping mechanism at the top and fastened to the frame within 30 centimeters of the floor. These cables should be positioned at a distance of not more than 30 centimeters from the face of the roll and at a distance of not less than 25 millimeters from the calendar frame.

5. Maintenance and Safety Devices:—Safety-trip rods and tight wire cables on all rubber mills and calendars shall be examined and tested daily in the presence of the occupier or other qualified person and if any defect is disclosed by such examination and test, the mill or calendars shall not be used until such defect has been remedied. Record of such examination and testing shall be maintained.

6. Injection Moulding Machine and Extruders:—

(1) A Suitable interlock arrangement shall be provided and maintained so that moulds cannot be closed unless the front safety gate is fully closed and on opening the front safety gate, the movement of moulds will stop automatically. No access shall be available to the moulds through the safety gate.

(2) In addition to the above, a hydraulic safety arrangement shall also be incorporated with the front safety gate. This shall prevent the tail stock mould plate from

moving forward on opening of the front safety gate.

(3) At the rear of the machine there shall be provided either an efficient fixed guard or a sliding gate which shall be suitably inter-locked with the movement of the mould plates in the manner of the front safety gate as required under (1) above so as to prevent access to the danger zone of the moulds in motion from the rear.

(4) The injection unit and all other accessible parts shall be adequately insulated or guarded and warning signs shall be displayed where hot parts are necessarily exposed.

(5) The electrical safety of the machine shall be ensured through proper insulation of heating elements and provision of ground fault current breaker systems.

7. **Ventilation**

(1) Adequate ventilation arrangements shall be provided and maintained at all times in the process area referred in paragraph (1) where dangerous or toxic or flammable or explosive dust, fumes and vapours could be present. These arrangements shall ensure that concentrations, which are either harmful or could result in fire or explosion, are not permitted to be built up in the work environment.

(2) By suitable means, ventilation arrangements shall provide adequate supply of fresh air along with the maintenance of workplace temperature without detrimental to the health of the workers employed therein.

8. Safety Precautions.-

(1) Written safe system of work shall be developed and followed for safety of all workers working on the machine, mould changing and maintenance work and all such workers shall be adequately trained and instructed in the safe method of work before being employed.

(2) No process or work shall be carried on in such a manner as to cause risk of bodily injury to the persons employed.

9. Personal protective equipments:

(1) Workers shall be provided with suitable personal protective equipment to prevent burns from contact with hot surfaces or splatters of hot plastic and gases.

(2) An approved breathing apparatus and protective clothing shall be provided and maintained in good condition for use of every person employed in process area.

9. Medical facilities and records of examination and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined

by the Health Surveillance Officer-

(a) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(b) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCIIEDULE- XI

GRAPHITE POWDERING

1. Application

The provisions of this schedule shall apply to all factories or parts of factories in which the grinding and sieving of graphite and the processes incidental thereto are

carried on.

2. Medical certificates and examinations

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be

employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

3. Exhaust draught

Provisions shall be made for removing the dust produced in any of the operations specified in paragraph 1 above by means of an efficient exhaust draught so contrived as to operate on the dust as closely to the point of origin as possible:

Provided that where the provision of an exhaust draught is not reasonably practicable the Inspector-cum-Facilitator may require

(a) respirators of a type approved by him to be provided and maintained in a clean and efficient condition by the occupier and worn by every person working under such conditions ; and

(b) the damping of floors, apparatus and material to prevent the raising of dust.

4. Floor and work benches

(1) The floor of every room in which any person is employed upon any of the operations specified in paragraph 1 above shall be of cement or other impervious material.

(2) The top of every work-bench in every such room shall be of impervious material.

(3) The said floors and work-benches shall be kept dean and in good condition.

(4) The Inspector-cum-Facilitator may, by order in writing, require the said floors and work-benches to be kept wet in such manner as he may deem suitable, in order to reduce dust.

5. Washing facilities

The occupier shall provide and maintain in a clean state and in good repair for the use of persons employed upon any of the operations specified in paragraph 1 above either (a) a trough with smooth impervious surface fitted with a waste-pipe without plug, and of sufficient length to allow at least 61 centimeters for every five such persons employed at any one time and having a constant supply of water, from taps or jets above the trough at intervals of not more than 61 centimeters, or (b) at least one lavatory basin for every five such persons employed at any one time, fitted with a waste pipe and plug having a constant supply of water, together with, in either case a sufficient supply of nail brushes, soap or other suitable cleaning material and clean towels.

6. Food, drink, and tobacco

No food, drink, pan and supari or tobacco shall be brought into, or consumed, in any room in which any person is employed upon any of the operations specified in paragraph 1 above.

7. Protective equipments:

Adequate protective clothing, such as over-alls in a clean condition and dust masks shall be provided by the occupier to every person employed upon any of the

operations specified in paragraph 1 above.

SCHEDULE- XII
PRINTING PRESS AND TYPE FOUNDRIES - CERTAIN LEAD PROCESS CARRIED ON THEREIN

1. Definitions

In these regulations —

(1) 'Lead material' means material containing not less than 5 Percent of lead.

(2) 'Lead process' means

(a) the melting of lead or any lead material for casting and mechanical composing;

(b) the recharging of machines with used lead material ; or

(c) any other work including removal of dross from melting pots, cleaning of plungers ; and

(d) Manipulation, movement or other treatment of lead material.

(2) 'Efficient exhaust draught' means localized ventilation effected by heat or mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fume or dust at the point where they originate.

2. Exhaust draught

None of the following process shall be carried on except with an efficient exhaust draught:

(a) melting lead material or slugs ;

(b) heating lead material so that vapour containing lead is given off ; or

unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried an ; or

unless carried on in electrically heated and thermostatically control-led melting pots.

Such exhaust draught shall be effected by mechanical means and so contrived as to operate on the dust, fume, gas or vapour given off as closely as may be at its point of origin.

3. Separation of certain processes

Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and from any other process:

(a) melting of lead or any lead material;

(b) casting of lead ingots ;

(c) mechanical composing.

4. Container for dross

A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room near the machine except when the dross is being deposited therein.

5. Floor of workroom

The floor of every work- room where lead process is carried on shall be

(a) of cement or similar material so as to be smooth and impervious to water;

(b) maintained in sound condition ; and

(c) shall be cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.

6. Mess room

There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess - room which shall be furnished with sufficient tables and benches.

7. Washing facilities

There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process,

(a) a wash place with either

(i) a trough with smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 61 centimeters for every five such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals of not more than 61 centimeters , or

(ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available ; and

(b) a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material.

8. Medical facilities and records of examination and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined

by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

Provided that such examination shall include tests for lead in urine and blood, ALA in urine, hemoglobin, stippling of cells and steadiness tests.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7)The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

9. Food, drinks, etc., prohibited in work rooms

No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.

SCHEDULE- XIII

CASHEW-NUT PROCESSING

1. Application

The provisions of this schedule shall apply to all factories in which roasting, scrubbing or shelling of cashew-nuts or extracting oil from cashew- nuts or cashew-nuts shells is carried on.

2. Protective clothing and equipment

The occupier shall provide and maintain --

(i) for the use of all persons employed in roasting or scrubbing of cashew-nuts or extracting oil from cashew-nuts or cashew- nuts shells

(a) suitable rubber or washable leather gloves,

(b) suitable impervious aprons with sleeves to cover the body down to the knees and shoulders, and

(c) suitable foot-wear to afford protection to the feet and legs against cashew-nut oil ;

(ii) for the workers employed in cashew- nut shelling, either,

(a) protective ointment containing 10 per cent of shellac, 55 percent of alcohol, 10 per cent. of sodium perborate, 5 percent of carbitol and 20 percent of talc, or

(b) a sufficient quantity of kaolin and coconut oil ; and

(iii)any other material or equipment which the Chief Inspector-cum-Facilitator may deem to be necessary for the protection of the workers.

3. Use of protective clothing and equipment

Every person employed in the processes specified in paragraph 1, shall make use of the protective clothing and equipment supplied and arrangement shall be made by the occupier to supervise their maintenance and cleanliness.

4. Disposal of shells, ashes or oil of cashew-nut

(i) Shells, ashes or oil of cashew-nut shall not be stored in any room in which workers are employed and shall be removed atleast twice a day to any pit or enclosed place in the case of shells and ashes and to closed containers kept in a separate room in the case of oil.

(ii) No worker shall be allowed to handle shells or oil of cashew-nut without using the protective measures provided in paragraph 3.

5. Floors of work-rooms

The floor of every work-room in which the processes specified in paragraph 1 are carried on shall be of a hard material so as to be smooth and impervious and of even surface and shall be cleaned daily ; and spillage of any cashew- nut oil in any work-room shall be washed with soap and cleaned immediately.

6. Seating accommodation

Workers engaged in shelling of cashew-nuts shall be provided with adequate seats of work benches which shall be cleaned daily.

7. Mess-room

(a) There shall be provided and maintained for the use of all persons employed in the processes specified in paragraph 1, a suitable rest room furnished with a sufficient number of tables and chairs or benches ;

(b) Separate lockers shall be provided where food, etc., shall be stored by workers before it is consumed in the rest room.

8**. Food, drinks, etc., prohibited in work-rooms**

No food, drink, pan, supari or tobacco shall be brought or consumed by any worker in any room in which the processes specified is paragraph 1 are carried out and no person shall remain in any such room during intervals for meals or rest.

9. Washing facilities

Where roasting, scrubbing and shelling of cashew- nuts or extracting oil from cashew-nuts or uts shells is carried on, there shall be provided and maintained, in clean and good repair, washing facilities, at the scale of one tap or stand pipe for every ten workers the taps or stand pipes being spaced not less than 4 feet apart and also a sufficient supply of soap, coconut oil, nail brushes and towels.

10. Time allowed for washing

Before each meal and before the end of the day's work at least ten minutes, in addition to the regular meal times, shall be allowed to any person employed in the process specified in paragraph 1, for the purpose of washing.

11. Smoke or gas produced by roasting cashew-nuts

Where smoke or gas is produced in the operation of roasting, provision shall be made for removing the smoke or gas through a chimney of sufficient height and capacity or by such other arrangements as may be necessary to prevent the gas or smoke from escaping into the air or any place in which workers are employed.

12. Storage of protective equipment:

A suitable room or a portion of the factory suitably partitioned off, shall be provided exclusively for the storage of all the protective equipment supplied to the workers and no such equipment shall be stored in any place other than the room or place so provided.

13. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The said Health Surveillance Officer shall inspect daily the hands and feet of all the persons employed in the process specified in para 1 of the schedule

(4) The first-aid box maintained shall also contain Burrough's Solution (1:20) and aqueous solution of tannic acid (10%) for treatment of cases of dermatitis.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- XIV

POTTERY

1. Definitions

For the purposes of this schedule

(a) 'pottery' includes earthenware, stoneware, porcelain, china tiles and any other articles made from clay or from a mixture containing clay, any other materials such as quartz, flint, feldspar and gypsum.

(b) 'efficient exhaust draught' means localized ventilation affected by mechanical or other means, for the removal of dust or fume so as to prevent it from escaping into the air or any place in which work is carried on. No draught shall be deemed efficient which fails to remove effectively dust or fume generated at the point where dust or fume originates;

(c) 'fettling' includes scalloping, towing, sand papering, sand sticking, brushing or any other process of cleaning of pottery-ware in which dust is given off ;

(d) 'leadless glaze' mean a glaze which does not contain more than one percent of its dry weight of a lead compound calculated as lead monoxide ;

(e) 'low solubility glaze' means a glaze which does not yield to dilute hydrochloric add more than five per cent. of its dry weight of a soluble lead compound calculated as lead monoxide when determined in the manner described below: —

A weighed quantity of the material which has been dried at 100°C and thoroughly mixed shall be continuously shaken for one hour at the common temperature with 1,003 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent. by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate;

(f) 'ground or powdered flint or quartz' does not include natural sands ;

(g) 'potter's shop' includes all places where pottery is firmed by pressing or by any other process and all places where shaping, fettling or other treatment of pottery articles prior to placing for the biscuit rue is carried on.

2. Efficient exhaust draught

The following processes shall not be carried on without the use of an efficient exhaust draught:

(i) All processes involving the manipulation or use of a dry and unfitted lead compound;

(ii) The fettling operations of any kind, whether on green ware or biscuit, provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power;

(iii) The sifting of clay dust or any other material for making tiles or other articles by pressure, except where

(a) this is done in a machine so enclosed as to effectively prevent the escape of dust

; or

(b) the material to be sifted is so damp that no dust can be given off ;

(iv) The pressing of tiles from clay dust, an exhaust opening being connected with each press ; this clause shall also apply to the pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off ;

(v) The fettling of tiles made from clay dust, by pressure. except where the fettling is done wholly on, or with, damp material;

(vi) The fettling of other articles made from clay dust, unless the material is so damp that no dust is given off;

(vii) The process of loading and unloading of saggars, where handling and manipulation of ground and powdered flint, quart, alumina or other materials are involved ;

(viii) The brushing of earthenware biscuit, unless the process is carried on in a room provided with efficient general mechanical ventilation or other ventilation which is certified by the Inspector-cum-Facilitator as adequate, having regard to all the circumstances of the case ;

(ix) Fettling of biscuit ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectively prevent the escape of dust;

(x) Ware cleaning after the application of glaze by dipping or other process;

(xi) Crushing and dry grinding of materials for pottery bodies and saggars, unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off ;

(xii) Sieving or manipulation of powdered flint, quartz, day grog or mixture of these materials unless it is so damp that no dust can be given off ;

(xiii) Grinding of tiles on a power- driven wheel unless an efficient water spray is used on the wheel ;

(xiv) Lifting and conveying of materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near any place in which persons are employed ;

(xv) The preparation or weighing out of flow material, !awning of dry colors, colour dusting and colour blowing;

(xvi) Mould making, unless the bins or similar receptacles are used for holding plaster of paris and provided with suitable covers;

(xvii) The manipulation of calcined materials unless the material has been made and remain so wet that no dust is given off.

3. Certain processes to be carried on so as to secure effective separation from one another

Each of the following processes shall be carried on in such a manner and under such conditions so as to secure effectual separation from one another, and from wet processes:

(a) Crushing and by grinding or sieving of materials, fettling, pressing of tiles, drying day and green ware, loading and unloading of saggars ; and

(b) all processes involving the use of a dry lead compound.

4. Restriction on the use of glaze

No glaze which is not a leadless glaze or a low solubility glaze shall be used in a factory in which pottery is manufactured.

5. Potter's wheel

The potter's wheel (Jolly and Jiggar) shall be provided with screens or so constructed as to prevent clay scrapings being thrown off beyond the wheel.

6. Prevention of dust

(1) All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.

(2) Damp saw dust or other suitable materials shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased.

7. Floors

The floors of potters' shops, slip houses, dipping houses and ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily by a moist method by an adult male.

8. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7)The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

11. Protective equipment

(1) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in the processes / operations for which the schedule is applicable.

(2) The occupier shall provide and maintain suitable aprons of water-proof or similar material, which can be sponged daily for the use of the dippers, dippers' assistants, throwers, jolly workers, casters, mould makers and filter press and pug mill workers.

(3) Aprons provided in pursuance of sub- paragraph (2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed, cleaned and mended atleast once a week and the occupier shall provide facilities for such washing, cleaning and mending.

(4) No person shall be allowed to work in emptying sacks of dusty materials, weighing out and mixing of dusty materials and charging of ball mills and blungers without wearing a suitable and efficient dust respirator.

12. Washing facilities

The occupier shall provide and maintain, in a cleanly state and in good repair for the use of all persons employed in any of the processes specified in paragraph 2 a wash

place under cover with --

(a) either a trough with smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow atleast 60 centimeters for every five such persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimeter; or

atleast one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.22 meters apart ; and

(b) a sufficient supply of clean towels made of suitable materials changed daily, with sufficient supply of nail brushes and soap.

13. Time allowed for washing

Before each meal and before the end of the day's work at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in any of the processes specified in paragraph 2.

14. Mess-room

(1) There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable and an adequate mess room providing accommodation at the rate of 0.93 square meters per head and furnished with the following, namely:

(a) a sufficient number of tables and chairs or benches with back rests ;

(b) arrangements for washing utensils;

(c) adequate means for warming food ; and

(d) adequate quantity of drinking water.

(2) The room shall be adequately ventilated by the circulation of 'fresh air and placed under the charge of a responsible person and shall be kept clean.

15. Food drinks, etc., prohibited in work- rooms

No food, drink, pan and supari or tobacco shall be brought into, or consumed by any worker in any work-room in which any process specified in paragraph 2 is carried on and no person shall remain in any such room during intervals for meals or rest.

16. Cloak-room, etc

There shall be provided and maintained for the use of all persons employed in any process specified in paragraph 2

(a) a cloak-room for clothing put off during working hours and such accommodation shall be separate from any mess room ; and

(b) separate and suitable arrangements for the storage of protective equipment provided under paragraph 11.

17. Savings

Nothing contained in this Schedule shall apply to a factory in which any of the following articles, but no other article of pottery are made:

(a) unglazed or salt glazed bricks and tiles ; and

(b) Architectural terra-cotta made from plastic clay and either unglazed or glazed with leadless glaze only.

SCHEDULE- XV

CHEMICAL WORKS

PART I

1. Application

This schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.

2. Definition

For the purpose of this Schedule

~~(a)~~ "chemical works " means any factory or such parts of any factory wherein the hazardous chemicals are manufactured, recovered or the manipulation of such chemicals is carried on.

(b) "efficient exhaust draught" means localized ventilation effected by mechanical or other means for the removal of gas, vapour, fume or dust to prevent it from escaping into the air of any place in which work is carried on;

(c) "bleaching powder" means the bleaching powder commonly called chloride of lime ;

(d) "chlorate" means chlorate or perchlorate;

(e) "caustic" means hydroxide of potassium or sodium;

(f) "chrome process" means the manufacture of chromate or bi-chromate of potassium or sodium, or the manipulation, movement or other treatment of these substances;

(g) "nitro or amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues and the making of explosives with the use of any of these substances ;

(h) the term 'permit to work' system means the compliance with the procedures laid down under paragraph 20 of Part II ;

(i) "toxic substances" means all those substances which when they enter into the human body, through inhalation or ingestion or absorption through skin in sufficient quantities cause fatality or exert serious affliction of health or chronic harmful effects on the health of persons exposed to it due to its inherent chemical or biological effects in respect of substances whose TLV is

specified in Rule 102-A, exceeding the concentration specified therein would make the substance toxic ;

(j) "emergency" means a situation or condition leading to a circumstance or set of circumstances in which there is danger to the life or health of persons or which could result in big fire or explosion or pollution to the work and outside environment, affecting the workers or neighborhood in a serious manner, demanding immediate action;

(k) "dangerous chemical reactions" means high speed reactions, rim-away reactions, delayed reactions, etc., and are characterized by evolution of large quantities of heat, intense release of toxic or flammable gases or vapors, sudden pressure build-up, etc;

(l) "manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling, using, etc. ;

(m) "approved personal protective equipment" means items of personal protective equipment conforming to the relevant BIS specifications or in the absence of it, personal protective equipment approved by the Chief Inspector-cum-Facilitator;

(n) "appropriate personal protective equipment" means that when the protective equipment is used by the worker, he shall have no risk to his life or health or body ; and

(o) "confined space" means any space by reason of its construction as well as in relation to the nature of the work carried therein and where hazards to the persons entering into or working inside exist or are likely to develop during working.

PART- II

GENERAL REQUIREMENTS

Applying to chemical works

1. House keeping

(1) Any spillage of materials shall be cleaned up before further processing.

(2) Floors, platforms, stairways, passages and gangways shall be kept free of any obstructions.

(3) There shall be provided easy means of access to all parts of the plant to facilitate cleaning.

2. Improper use of chemicals

No chemicals or solvents or empty containers containing residual chemicals, solvents or vapours shall be permitted to be used by workers for any purposes other than in the processes for which they are supplied.

3. Prohibition on the use of food, etc.,

No food, drink, tobacco, pan or any edible item shall be stored or heated or consumed on or near any part of the plant or equipment.

4. Cautionary notices and instructions

(1) Cautionary notices in a language understood by the majority of workers shall be prominently displayed in all hazardous areas drawing the attention of all workers about the hazards to health, hazards involving fire and explosion and any other hazard such as consequences of testing of material or substances used in the process or using any contaminated container for drinking or eating, to which the workers' attention should be drawn for ensuring their safety and health.

(2) In addition to the above cautionary notice, arrangement shall be made to instruct and educate all the workers including illiterate workers about the hazards in the process including the specific hazards to which they may be exposed to, in the normal course of their work. Such instructions and education should also deal with the hazards involved in unauthorized and unsafe practices including the properties of substances used in the process under normal conditions as well as abnormal conditions and the precautions to be observed against each and every hazard. Further, an undertaking from the workers shall be obtained within one month of their employment and (or old workers employed, within one month of coming into operation of the rules, to the effect that they have read the contents of the cautionary notices and instructions, understood them and would abide by them. The training and instructions to all workers and all supervisory personnel shall include the significance of different types of symbols and colors used on the labels struck or painted on the various types of containers and pipelines.

5. Evaluation and provisions of safeguards before the commencement of process

(1) Before commencing any process or any experimental work, or any new manufacture, the occupier shall take all possible steps to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions including the dangerous chemical reactions. The properties of the raw materials used, the final products to be made, and any by-products derived during manufacture, shall be carefully studied and provisions shall be made for dealing with any hazards including effects on workers, which may occur during manufacture.

(2) Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken from the design stage to disposal stage for ensuring the safety as in sub-paragraph (1) above should be sent to the Chief Inspector-cum-Facilitator at the earliest but in no case less than 15 days before commencing manufacture, handling, or storage whether on experimental basis, or as pilot plant or as trial production, or as large-scale manufacture.

(3) The design, construction, installation, operation, maintenance and disposal of the buildings, plant and facilities shall take into consideration effective safeguards

against all the safety and health hazards so evaluated.

(4) The requirements under the sub-paragraphs (1) to (3) shall not ad in lieu of or in derogation to, any other provisions contained in any Act governing the work.

6. Authorised entry

Authorised persons only shall be permitted to enter any section of the factory or plant where any dangerous operations or processes are being carried on or where dangerous chemical reactions are taking place or where hazardous chemicals are stored.

7. Examination of instruments and safety devices

(1) All instruments and safety devices used in the process shall be tested before taking into use and after carrying out any repair to them and examined once in a month, by a qualified person and once in every six months, by a competent person. Records of such tests and examinations shall be maintained in a register.

(2) All instruments and safety devices used in the process shall be operated daily or as often as it is necessary, to ensure its effective and efficient working at all times.

8. Electrical Installations

All electrical installations used shall be of an appropriate type to ensure safety against the hazard prevalent in that area such as suitability against dust, dampness, corrosion, flammability and explosion, etc., and shall conform to the relevant ISI specifications governing their construction and use for that area.

9. Handling and storage of chemicals

(1) The containers for handling and storage of chemicals shall be of adequate strength taking into consideration the hazardous nature of the contents. They shall also be provided with adequate labeling and colour coding arrangements to enable identification of the containers and their contents indicating the hazards and safe handling methods and shall conform to the respective ISI standards. The instructions given in the label shall be strictly adhered to. Damaged containers shall be handled only under supervision of a knowledgeable and responsible person and spillage shall be rendered innocuous in a safe manner using appropriate means.

(2) The arrangements for the storage of chemicals including charging of chemicals in reaction vessels and containers shall be such as to prevent any risk of fire or explosion or formation of toxic concentration of substances above the limits specified in Rule 102-A.

(3) Without prejudice to the generality of the requirements in sub-paragraph (2) above, the arrangements shall have suitable ventilation facilities and shall enable the maintenance of safe levels in vessels and containers. Such arrangements shall also

(4) take into consideration, the type of flooring and the capacity of flooring and the compatibility requirements of substances with other chemicals stored nearby.

(5) (a) Storage of chemicals and intermediate products, which are highly unstable or

reactive or explosive shall be limited to the quantities required for two months use.

(b) Whenever the quantities laid down in the above clause (a) are to be exceeded, the permission of the Chief Inspector-cum-Facilitator shall be obtained.

(c) Notwithstanding anything contained in clauses (a) and (b) above, the Chief Inspector-cum-Facilitator may direct any factory carrying out processes covered in chemical works to further limit the storage of hazardous substances to quantities less than two months on considerations of safety.

(6) Standby arrangements equal to the biggest container shall always be available to transfer the toxic substances quickly into the standby storage facility if any defect develops in any of the containers resulting in the release of toxic substances.

(7) Any storage facility constructed using non-metallic material such as Fiber glass Reinforced Plastics (FRP), all glass vessels, etc., shall have adequate strength to withstand the stress, if any, exerted by the contents and shall be properly anchored. Working platforms, atom ladders, pipe lines, etc., used in such storage facility shall not have any support on the structure of the storage facility and shall be independently supported.

10. Facility for Isolation

The plant and equipment shall be so constructed and maintained as to enable quick isolation of plant or part of plant or equipment, with appropriate indication. One copy of the layout plan indicating the isolation facilities shall always be available with the security personnel, the maintenance and the Health and Safety personnel and these isolation facilities shall be checked for its effectiveness once in a month.

11. Personal protective equipment

(1) All workers exposed to the hazards in the processes covered by this schedule shall be provided with appropriate and approved type of personal protective equipment. Such equipment shall be m a clean, sterile and hygienic condition before issue.

(2) The occupier shall arrange to inform, educate and supervise all the workers in the use of personal protective equipment while carrying out the job.

(3) As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector-cum-Facilitator will be final.

12. Alarm systems

(1) Suitable alarm and effective alarm systems giving audible and visible indications, shall be installed at the control room as well as in all strategic locations where process control arrangements are available so as to enable corrective action to be taken before the operational parameters exceed the predetermined safe levels or lead to conditions conducive for an outbreak of fire or explosion to occur. Such alarm systems shall be checked daily and tested every month at least once to ensure its performance efficiency at all times.

(2) The Chief Inspector-cum-Facilitator may direct such systems to be installed in

case of plants or processes where toxic materials are being used and spillage or leakage of which may cause widespread poisoning to or around the plant.

13. Control of escape of substances into the work atmosphere

(1) Effective arrangements such as enclosure, or by-pass or efficient exhaust draught, maintenance of negative pressure, etc., shall be provided in all plants, containers, vessels, sewers, drains, flues, ducts, culverts and buried pipes and equipments, to control the escape and spread of substances which are likely to give rise to fire or explosion or toxic hazards during normal working and in the event of accident or emergency.

(2) In the event of the failure of the arrangements for control resulting in the escape of substances in the work atmosphere immediate steps shall be taken to control the process in such a manner, that further escape is brought down to the safe level.

(3) The substances that would have escaped into the work atmosphere before taking immediate steps as required in sub-paragraph (2), shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.

(4) The level of concentration of toxic substances in the work atmosphere shall be monitored by suitable devices and shall not exceed the permissible levels specified in rule 102.

14. Control of dangerous chemical reactions

Suitable provisions, such as automatic and or remote control arrangements, shall be made for controlling the effects of "dangerous chemical reactions". In the event of failure of control arrangements automatic flooding or blanketing or other effective arrangements shall come into operation.

15. Testing, examination, repair and maintenance of plant and equipment

(1) All parts of plant, equipment and machinery used in the process which in the likely event of their failure may give rise to an emergent situation shall be tested by a competent person before commencing process and retested at an interval of two years or after carrying out repairs to it. The competent person shall identify the parts of the plant, equipment and machinery required to be tested as aforesaid and evolve a suitable testing procedures. In carrying out the test as mentioned above in respect of pressure vessels or reaction vessels the following precautions shall be observed, namely :

(a) before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally also for surface defects, corrosion and foreign matter. During the process of cleaning and removal of sludge, if any, all due precautions shall be taken against fire or explosion, if such sludge is of pyrophoric nature or contains spontaneously combustible chemicals;

(b) as soon as the test is completed, the vessel shall be thoroughly dried internally and shall be clearly stamped with the marks and figures indicating the person by whom testing has been done and the date of test ; and

(c) any vessel which fails to pass the test or which for any other reason is found to be unsafe for use shall be destroyed or rendered unusable under intimation to the Chief Inspector-cum-Facilitator.

(2) All parts of plant, equipment, machinery which in the likely event of failure may give rise to an emergent situation shall be examined once in a month by a qualified person and tested by a competent person once in every six months.

(3) Records of testing and examination referred to in paragraphs (1) and (2) shall be maintained as long as that part of the plant, equipment and machinery are in use.

(4) All repair work including alteration, modification and addition to be carried out to the plant, equipment and machinery shall be done under the supervision of a responsible person who shall evolve a procedure to ensure safety and health of persons doing the work. When repairs or modification is done on pipelines and joints are required to be welded, but welding of joints shall be preferred. Wherever necessary, the responsible person shall regulate the aforesaid work through a 'permit to work system'.

(5) No machinery, plant or equipment shall be operated or maintained in such a manner as to cause risk of bodily Injury.

16. Staging

(1) All staging that is erected for the purpose of maintenance work or repair work or for work connected with entry into confined spaces and used in the processes included in Appendix 'A shall be stable, rigid and constructed out of substantial material of adequate strength. Such staging shall conform to the respective Indian Standard Specifications.

(2) Staging shall not be erected over any closed or open vessel unless the vessel is so constructed and ventilated to prevent exposure of persons working on the stages.

(3) All the staging constructed for the purpose of this paragraph shall have appropriate access which are safe and shall be fitted with proper hand rails to a height of one meter and toe board.

17. Seating arrangements

The seating arrangements provided for the operating personnel working in processes covered in Appendix 'A' shall be located in a safe manner as to prevent the risk of exposure to toxic, flammable and explosive substances evolved in the work environment in the course of manufacture or repair or maintenance, either due to failure of plant and equipment or due to the substances which are under pressure, escaping into the atmosphere.

18. Entry into or work in confined space

(1) The occupier of every factory to which the provision of this schedule apply, shall ensure the observance of the following precautions before permitting any person to

enter or work inside the confined spaces:

(a) identify all confined spaces and the nature of hazards that are encountered in such spaces, normally or abnormally and arrange to develop the most appropriate safeguards for ensuring the safety and health of persons entering into or working inside, the confined spaces;

(b) regulate the entry or work inside the confined spaces through a 'permit to work system' which should include the safeguards so developed as required under sub-clause (a) above;

(c) before testing the confined space for entry into or work, the place shall be rendered safe by washing or cleaning with neutralizing agents or purging with steam or men gases and making adequate forced ventilation arrangements or such measure which will render the confined space safe;

(d) shall arrange to carry out such tests as are necessary for the purpose by a competent person and ensure that the confined space is safe for the persons to enter or work. Such testing shall be carried out as often as is necessary during the course of work to ensure its continued safety;

(e) shall arrange to educate and train the personnel who would be required to work in confined spaces about the hazards involved in the work. He shall also keep in readiness the appropriate and approved personal protective equipment including arrangements for rescue, resurrection and first aid, and shall arrange supervision of the work at all times by a responsible and knowledgeable person.

(2) The Occupier shall maintain a log of all entry into or work in, confined spaces and such record shall contain the details of persons assigned for the work, the location of the work and such other details that would have a bearing on the safety and health of the persons assigned for this work. The log book so maintained shall be retained as long as the concerned workers are in service and produced to the Inspector-cum-Facilitator when demanded.

19. Maintenance work, etc

(1) All the work connected with the maintenance of plants and equipment including cleaning of empty containers which have held hazardous substances used in the processes covered in this Schedule, shall be carried out under 'permit to work system' employing trained personnel and under the supervision of responsible person, having knowledge of the hazards and precautions required to deal with them.

(2) Maintenance work shall be carried out in such a manner that there is no risk to persons in the vicinity or to persons who pass by. If necessary, the place of such work shall be cordoned off or the presence of unconnected persons effectively controlled.

20. Permit to work system

The permit to work system shall inter alia include the observance of the following

precautions while carrying out any specified work to be subjected to the permit to work system

(a) all work subject to the permit to work system shall be carried out under the supervision of a knowledgeable and responsible person;

(b) all parts of plant or machinery or equipment on which permit to work system is carried out, shall remain isolated from other parts throughout the period of permit to work and the place of work including the parts of plant, machinery shall be rendered safe by cleaning, purging, washing, etc.;

(c) all work subject to the permit to work system shall have pre-determined work procedures which integrate safety with the work. Such procedures shall be reviewed whenever any change occurs in material or equipment so that continued safety is ensured;

(d) persons who are assigned to carry out the permit to work system shall be physically fit in all respects taking into consideration the demands and nature of the work before entering into the confined space. Such person shall be adequately informed about the correct work procedure as well as the precautions to be observed while carrying out the permit to work system;

(e) adequate rescue arrangements wherever considered necessary and adequate first-aid, rescue and resurrection arrangements shall be available in good working condition near the place of work while carrying out the permit to work system, for use in emergency ;

(f) appropriate and approved personal protective equipment shall be use while carrying out the 'permit to work system';

(g) after completion of work subject to the 'permit to work system', the person responsible shall remove all the equipment and tools and restore to the original condition so as to prevent any danger while carrying out regular process.

21. Safety sampling personnel

The occupier shall ensure the safety of persons assigned for collecting samples by instructing them on the safe procedures. Such personnel shall be provided with proper and approved personal protective equipment, if required.

22. Ventilation

Adequate ventilation arrangements shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances could be evolved. These arrangements shall ensure that concentrations, which are either harmful or could result in explosion, are not permitted to be built up in the work environment.

23. Procedures for meeting emergencies

(1) The occupier of every factory carrying out the chemical works, shall arrange to identify all types of possible emergencies that could occur in the processes during

the course of work or while carrying out maintenance work or repair work. The emergencies so identified shall be reviewed every year.

(2) The occupier shall formulate a detailed plan to meet all such identified emergencies including arrangements for summoning outside help for rescue and fire-fighting and arrangements for making available urgent medical facilities.

(3) The occupier shall send the list of emergencies and the details of procedures and plans formulated to meet the emergencies to the Chief Inspector-cum-Facilitator.

(4) The occupier shall arrange to install distinctive and recognizable warning arrangements to caution all persons inside the plant as well as the neighboring community, if necessary, to enable evacuation of persons and to enable the observance of emergency procedures by the persons who are assigned emergency duties. All concerned must be well informed about the warning arrangement and their meaning. The arrangement must be checked for its effectiveness every month.

(5) Alternate power supply arrangements shall be made and inter-locked with the normal power supply. system so as to ensure constant supply of power to the facilities and equipment meant for compliance with requirements of paragraphs 10,11,12,13, 14,18 and 22 and this paragraph of Part II, Part III, Part IV and Part V of this Schedule.

(6) The occupier shall arrange to suspend the further process work in a place where emergency is established and shall forthwith evacuate all persons in the area except workers who have been assigned emergency duties.

(7) All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.

(8) All emergency procedures must be rehearsed every three months and deficiencies, if any, in the achievement of the objectives shall suitably be corrected.

(9) The occupier shall arrange to have ten percent of the workers trained in the use of First-Aid Fire Fighting appliances and in the rendering of specific First-Aid measures taking into consideration the special hazards of the particular process.

(10) The occupier shall furnish immediately on request the specific chemical identity of the hazardous substances to the treating physician when the information is needed to administer proper emergency or first-aid treatment to exposed persons.

24. Danger due to effluents

(1) Adequate precautions shall be taken to prevent the mixing of effluents from different processes and operations which may cause dangerous or poisonous gases to be evolved

(2) Effluents which contain or give rise in the presence of other effluents to poisonous gases shall be provided with independent drainage systems to ensure that they may be trapped and rendered safe

PART- III

FIRE AND EXPLOSIONS RISKS

1. Source of ignition including lighting installation

(1) No internal combustion engine and no electric motor or other electrical equipment and fittings and fixtures capable of generating sparks or otherwise causing combustion or any other source of ignition or any naked light, shall be installed or permitted to be used in the process area where there could be fire and explosion hazards.

(2) All hot exhaust pipes shall be installed outside a building and other hot pipes or hot surface or surfaces likely to become hot shall be suitably protected

(3) The classification of work areas in terms of its hazard potential and the selection of electrical equipment or other equipment that could constitute a source of ignition shall be in accordance with the respective Indian Standard.

(4) Where flammable atmosphere may be prevalent or could occur, the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks or conveyers shall be conductive type.

(5) All tools and appliances used for work in this area shall be of non-sparking type.

(6) Smoking in process areas where there are risks of fire and explosion shall be prohibited, and warning notices in the language understood by majority of workers shall be posted in the factory prohibiting smoking in the specified areas.

2. Static Electricity

(1) All machinery and plant, particularly pipe lines and belt drives, on which static charge is likely to accumulate, shall be effectively earthed. Receptacles for flammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary, humidity shall be regulated.

(2) Mobile Tanker-wagons shall be earthed during filling and discharge, precautions shall be taken to ensure that earthing is effective before suck filling or discharge takes place.

3. Lightning protection

Lightning protection arrangement shall be fitted where necessary, and shall be maintained.

4. Process heating

The method of providing heat for a process likely to result in fire and explosion shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as to prevent any escaping flammable gas, vapour, or dust coming into contact with the flame, or exhaust gases, or other sources likely to cause ignition. Wherever possible, the heating arrangement shall be automatically controlled at a pre-determined temperature below the danger temperature.

5. Leakage of flammable liquids

(1) Provision shall be made to confine by means of suitable bund walls, dykes, sumps, etc., possible leakages from storage vessels containing flammable liquids.

(2) Waste material in contact with flammable substances shall be disposed off suitably under the supervision of knowledgeable and responsible person.

(3) Adequate and suitable fire fighting appliances shall be in-stalled in the vicinity of such vessels.

6. Safety valves

Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is liable to rise above the atmospheric pressure, shall have attached to it a pressure guage and a proper safety valve or other equally efficient means to relieve the pressure. These appliances shall be maintained in good condition.

7. Installation of pipe lines, etc

All pipe lines carrying flammable or explosive substances shall be protected from mechanical damage and shall be examined by a responsible person once in a week to detect any deterioration or defects, or accumulation of flammable or explosive substances, and record kept of any defects found and repairs made.

8. Fire fighting system

(1) Every factory employing 500 or more persons and carrying out processes listed in Appendix 'A' shall provide

(a) Trained and responsible fire fighting squad so as to effectively handle the fire-fighting and life saving equipment in the event of fire or other emergency. Number of persons in this squad will necessarily depend upon the size of risk involved, but in no case shall be less than eight such trained persons to be available at any time. The squad shall consist of watch and ward personnel, fire pump man and departmental supervisors and operators trained in the operation of fire and emergency services.

(b) Squad leaders shall preferably be trained in a recognised Government institution and their usefulness enhanced by providing residence on the premises.

(c) Squad personnel shall be provided with clothing and equipment including helmets, boots and belts.

(2) A muster roll showing the duties allocated to each member of the squad shall be prepared and copies supplied to each leader as well as displayed in prominent places so as to be easily available for reference in case of emergency.

(3) The pump man shall be thoroughly conversant with the location of all appliances. He shall be responsible for maintaining all firefighting equipment in proper working

order. Any defect coming to his notice shall be immediately brought to the notice of squad leader.

(4) As far as is practicable, the fire pump room and the main gate(s) of the factory be connected to all manufacturing or storing areas through telephone interlinked and placed in a convenient location near such areas.

(5) Fire hydrant system shall be capable of supplying a minimum of 4,500 liters per minute at a pressure of not less than 7 kilograms per square cm.

(6) Adequate provision of water supply for firefighting shall be made with static storage capacity of not less than 2 hours aggregate pumping.

PART -IV
RISKS OF TOXIC SUBSTANCES

1. Leakage

(1) All plants shall be so designed and constructed as to prevent the escape of toxic substance. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localize any escape of toxic substances.

(2) Catch pits, band walls, dykes, or other suitable safeguards shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipelines where there is danger involved to maintenance and other workers from such leakage.

2. Drainage

Adequate drainage shall be provided and shall lead to collection tanks specifically provided for this purpose wherein deleterious material shall be neutralized, treated or otherwise rendered safe before it is discharged into public drains or sewers.

3. Covering of vessels

(1) Every fixed vessel or structure containing any toxic substance and not so covered as to eliminate all reasonable risk of accidental contact of any portion of the body of a worker, shall be so constructed as to avoid physical contact.

(2) Such vessel shall, unless its edge is atleast 90 centimeters above the adjoining ground or platform, be securely fenced to a height of atleast 90 centimeters above such adjoining ground or platform.

(3) Where such vessels adjoin and the space between them, clear of any surrounding brick or other work is either less than 45 centimeters in width or is 45 or more centimeters in width, but is not securely fenced on both sides to a height of atleast 90 centimeters, secure barriers shall be so placed as to prevent passage between them:

Provided that sub-paragraph (2) of this paragraph shall not apply to --

(a) saturators used in the manufacture of sulphate of ammonia ; and

(b) that part of the sides of brine evaporating pans which require raking, drawing or filling.

4. Continuous exhaust arrangement

(1) Any process evolving toxic vapour, gas, fume and substance shall have efficient continuous exhaust draught. Such arrangement shall be interlocked in the process control wherever possible.

(2) In the event of failure of continuous exhaust arrangement, means shall be provided to automatically stop the process.

5. Work bench

All the work benches used in process involving the manipulation of toxic substances, shall be waded properly and shall be made of smooth impervious surface which shall be washed daily after the completion of work.

6. Waste disposal

(1) There shall be provided a suitable receptacle made of non-absorbable material with a tightly fitting cover for depositing waste material soiled with toxic substances and the contents of such saturators shall be destroyed by burning or using other suitable receptacle methods under the supervision of a responsible person.

(2) During the course of manufacture, whenever any batch or intermediate products having toxicity is rejected on considerations of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactivate them, before disposal

(3) The empty containers of toxic substances shall be cleaned thoroughly before disposal under the supervision of a responsible person.

PART- V

SPECIAL PROVISIONS

1. Special precautions for Nitro or Amino Processes

(1) Unless the crystallized nitro or amino substances or any of its liquor is broken or agitated in a completely enclosed process so as not to give rise to dust or fume, such process shall be carried on under an efficient exhaust draught or by adopting any other suitable means in such a manner as to prevent the escape of dust or fume in the working atmosphere.

(2) No part of the plant or equipment or implements which was in contact with intro or amino compounds shall be repaired, or handled unless they have been emptied and thoroughly cleaned and decontaminated.

(3) Filling of containers with nitro or amino compounds shall be done only by using a suitable scoop to avoid physical contact and the drying of the containers in the stove shall be done in such a manner that the hot and contaminated air from the stove is not drawn into the work room.

(4) Processes involving the steaming into or around any vessel contain g nitro or amino compounds or its raw materials shall be carried out in such a manner that the steam or vapour is effectively prevented to be blown back into the working atmosphere.

(5) Suitable antidotes such as methylene blue injections shall always be available at designated places of work for use during emergency involving the poisoning with nitro or amino compounds.

2. Special precautions for chrome processes

(1) Grinding and sieving of raw materials in chorine processes shall be carried on In such a manner and under such condition as to secure effective separation from any other processes and under an efficient exhaust draught.

(2) There shall be washing facilities located very near to places where wet chrome processes such as leaching, acidification, sulphate settling, evaporation crystallization, centrifugation or packing arc carried out, to enable quick washing of affected parts of body with running water.

(3) Weekly inspection of hand and fat of all persons employed in chrome pawns shall be done by a qualified nurse and record of such inspections shall be maintained in a form approved by the Chief Inspector-cum-Facilitator.

(4) There shall be always available at designated places of work, suitable ointment such as glycerine, Vaseline, etc., and water proof plaster in a separate box readily accessible to the workers so as to protect against perforation of nasal septum.

3. Special precautions for processes carried out in all glass vessels

(1) Processes and chemical reactions such as manufacture of vinyl chloride, benzyl chloride, etc., which are required to be carried out in all glass vessels shall have suitable means like substantial wire mesh covering to protect persons working nearby in the event of breakage of glass vessel.

(2) Any spillage or emission of vapour from all glass vessel due to breakage, shall be immediately inactivated or rendered innocuous by suitable means such as dilution with water or suitable solvents so as to avoid the risk of fire or explosion or health hazards.

4. Special precautions for processes involving chlorate manufacture

(1) Crystallization, grinding or packing of chlorate shall not be done in a place used for any other purpose and such places shall have hard, smooth and impervious surface made of non-combustible material. The place shall be thoroughly cleaned daily.

(2) The personal protective equipment like overall, etc., provided for the chlorate workers shall not be taken from the place of work and they shall be thoroughly cleaned daily.

(3) Adequate quantity of water shall be available near the place of chlorate process for use during fire emergency.

(4) Wooden vessels shall not be used for the crystallization of chlorate or to contain crystallized ground chlorate.

5. Special precautions in the use of plant and equipment made from reinforced plastics

(1) All plant and equipments shall conform to appropriate Indian or any other National Standard.

(2) Care shall be taken during storage, transport, handling and installation of plant and equipments to avoid accidental damage.

(3) All plant and equipments shall be installed in such a way as to ensure that loads are distributed as intended in design or as per the recommendations of the manufacturers.

(4) All pipe work shall be supported so that total loads local to the branches on the vessel or tank do not exceed their design values.

(5) After erection, all plant and equipments shall be subjected to a pressure test followed by a thorough examination by a competent person. The test and examination shall be as per relevant standard. A certificate of test and examination by competent person shall be obtained and kept available at site.

(6) All plant and equipments shall be subjected to periodical test and examination and record maintained as per paragraph 15 in Part II of this schedule.

(7) Plant and equipments during their use shall not be subjected to over filling or overloading beyond rated capacity.

6. **Special precautions for fumigation process:**

The Occupier shall ensure the health and safety of the workers required to enter into the confined space where Fumigation process is carried on, which includes personal protective equipments, supervision, testing procedures to ensure the suitability of the workspace for human health and safety.

PART- VI

MEDICAL REQUIREMENTS

1. Decontamination facilities

In all places where toxic substances are used, the following provisions shall be made to meet an emergency:

(a) Fully equipped first-aid box.

(b) Readily accessible means of drenching with water persons, part of body of persons, and clothing of persons who have been contaminated with such toxic and corrosive substances, and such means shall be as shown in the table below:

Number of persons employed Number at any time	Number of drenching showers
Upton 50 persons	2
between 51 to 100	3
101 to 200	3+ 1 for every 50 persons thereafter
201 to 400	5+ 1 for every100 persons thereafter
401 and above	7+ 1 for every 200 persons thereafter

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

2. Occupational health center

In all the factories carrying out chemical works, there shall be provided and maintained in good order an occupational health center with facilities as per scale laid down hereunder

(1) For factories employing up to 50 workers

(a) the services of a Health Surveillance Officer, available on retainer ship basis, in his notified clinic near to the factory for seeking medical help during emergency. He will also carry out the pre-employment and periodical medical examinations as stipulated in paragraph 4 of this part.

(b) A minimum of five persons trained in first-aid procedures, amongst whom atleast one shall always be available during the working period

(c) A fully equipped first-aid box.

(2) For factories employing 51 to 200 workers

(a) The occupational health centre shall have a room having a minimum floor area of 1.5 sq. m. with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

(b) A part-time Health Surveillance Officer will be in overall charge of the Centre who shall visit the factory minimum twice in a week and whose services shall be readily available during emergencies.

(c) There shall be one qualified and trained dresser-Cum-compounder on duty throughout the working period.

(d) A fully equipped first aid box.

(3) For factories employing above 200 workers

(a) There shall be one full-time Health Surveillance Officer for factories employing up to 500 workers and one more Health Surveillance Officer for every 1,000 workers or part thereof.

(b) The occupational health center in this case shall have a minimum of 2 rooms each having a minimum floor area of 15 square meter with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

(c) There shall be one trained nurse, one dresser-Cum-compounder and one sweeper-cum-ward boy throughout the working period.

(d) The occupational Health Centre in this case shall be suitably equipped to manage medical emergencies.

3. Ambulance Van

(1) In every factory carrying out chemical work there shall be provided and maintained in good condition, a suitably constructed and fully equipped ambulance van manned by a fulltime driver-cum-mechanic and a helper, trained in first-aid for the purposes of transportation of serious cases of accidents or sickness unless arrangements for procuring such facility at short notice during emergencies have been made with the nearby hospital or other places. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will always be available near the occupational health center.

(2) The relaxation to procure Ambulance Van from nearby places provided for in sub-paragraph (1) above will not be applicable to factories if the chemical work is also covered by hazardous process and for factories carrying chemical works by employing more than 500 workers.

4. Medical examination

(1) Workers employed in chemical works shall be medically examined by a Health Surveillance Officer in the following manner:

(a) Once before employment, to ascertain physical suitability of the person to do the particular job;

(b) Once in a period of 6 months, to ascertain the health status of the workers; and

(2) The details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health register in Form : HR

(3) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(4) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and

communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(5) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(6) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register

PART- VII
ADDITIONAL WELFARE AMENITIES

1. Washing facilities

(1) There shall be provided and maintained in every factory for the use of all the workers taps for washing, at the rate of one tap for every 15 persons including liquid soap in a container with tilting arrangements and nail brushes or other suitable means for effective cleaning. Such facilities shall be conveniently accessible and shall be kept in a clean and hygienic condition.

(2) If washing facilities as required above are provided for women, such facilities shall be separate for them and adequate privacy at all times shall be ensured in such facilities.

2. Mess-room facilities

(1) The occupier of all the factories carrying out chemical works and employing 50 workers or more shall provide for all the workers working in a shift, mess room facilities which are well ventilated and provided with tables and sitting facilities along with the provision of cold and hygienic drinking water facilities.

(2) Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clean and hygienic condition.

3. Cloak room facilities

(1) The occupier of every factory carrying out chemical works shall provide for all the workers employed in the process, cloak room facilities with lockers. Each worker shall be provided with two lockers, one for work clothing and another separately for personal clothing and the lockers should be such as to enable the keeping of the clothing in a hanging position.

(2) The cloak room facilities so provided in pursuance of sub-paragraph (1) shall be located as far as possible near to the facilities provided for washing in pursuance of

paragraph 1 (1). If it is not possible to locate the washing facilities, the cloak room facilities shall have adequate and suitable arrangements for cleaning and washing.

4. Special bathing facilities

(1) The occupier of any factory carrying out the following processes shall provide special bathing facilities for all the workers employed and such facilities shall be provided at the rate of 1 for 25 workers and part thereof, and shall be maintained in a clean and hygienic condition.

1. Nitro or amino processes.
2. All chrome processes.
3. Processes of distilling gas or coal tar or processes of chemical manufacture in which tar is used.
4. Processes involving manufacture, manipulation, handling or recovery of cyanogen compound, cyanide compound, cyanate compounds.
5. Processes involving manufacture of bleaching powder or production of chlorine gas in chloro alkali plants.
6. Manufacture, manipulation or recovery of nickel and its compounds.
7. All processes involving the manufacture, manipulation or recovery of aliphatic or aromatic compounds or their derivatives or substituted derivatives.

(2) The occupier shall insist all the workers employed in the processes listed in subrule (1) above to take bath after the completion of the day's or shift work using the bathing facilities so provided and shall also effectively prevent such of those workers taking bath in any place other than the bathing facilities.

(3) Notwithstanding anything contained in sub-paragraph (1) above, the Chief Inspector-cum-Facilitator may require in writing the occupier of any factory carrying out any other process for which in his opinion bathing facilities are essential from the health point of view, to provide special bathing facilities.

PART- VIII

1. Duties of workers

Every worker employed in a factory carrying chemical work shall always co-operate in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of provisions of this code and building occupational Safety & Health culture. In particular, the workers shall carry out the following duties.

(1) Every worker who comes to know about existence of any of unsafe or unhealthy conditions in the establishment shall report to the employer or health and safety representative or safety officer or concerned Supervisor as soon as practicable, electronically or in writing or telephonically.

(2) Every worker shall not make safety device or appliance or any guarding or fencing arrangement,
inoperative or defective and shall report the defective condition of the aforesaid arrangements as soon as he is aware of any such defect.

(3) Before commencing any work, all workers shall check their workplace as well as the machinery,
equipment or appliance used and report any malfunction or defect immediately to the supervisor or
any responsible person of the management.

(4) All workers shall always use all the personal protective equipment issued to them in a careful manner.

(5) All workers shall not remain in unauthorised place or carryout unauthorised work or improvise any
arrangements or adopt short cut method or misuse any of the arrangements in the manner against to
the interest of Occupational Safety & Health.

(6) The workers shall not refuse undergoing medical examination as required under these rules.

PART- IX
Exemptions

1. **Power of Exemption**:- The State Government or subject to the control of the State Government, the Chief Inspector cum Facilitator may exempt from the compliance with any of the requirements of this schedule partly or fully, any factory carrying out Chemical Works, if it is clearly and satisfactorily established by the occupier that the compliance with any of the requirement is not necessary to ensure the safety and health of persons employed suitable and effective alternate arrangements are available to any of the requirements covered in this schedule.

SCHEDULE- XVI

COMPRESSION OF OXYGEN AND HYDROGEN PRODUCED BY THE ELECTROLYSIS OF WATER

1. The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.
2. The purity of oxygen and hydrogen shall be tested by a competent person at least once in every shift at the following points
   (i) in the electrolysis room;
   (ii) at the gas-holder inlet ; and

(iii)at the suction end of the compressor.

The purity figures shall be entered in the register and signed by the persons carrying out such tests:

Provided, however, that if the electrolyser plant is fitted with automatic recorded to purity of oxygen and hydrogen with alarm lights, it shall be sufficient if the purity of the gases is tested at the suction end of the compressor only.

3. The oxygen and hydrogen gases shall not be compressed if their purity as determined under clause 2 above falls below 98 percent at any time.

3-A. The bell of any gas-holder shall not be permitted to go within 30 cms of its lowest position when empty and a limit switch shall be fitted to the gas-holder in such a manner as to switch off the compressor motor when this limit is reached.

4. In addition to the limit switch in the gas-holder, a sensitive negative pressure switch shall be provided in, or adjacent to the suction main for hydrogen, close to the gas-holder and between the gas-holder and the hydrogen compressor to switch off the compressor motor in the event of the gas-holder being emptied to the extent as to cause vacuum.

5. The water and caustic soda and caustic potash used for making electrolytes shall be of standards suitable for electrolysis.

6. Electrical connections at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude the possibility of wrong connections leading to the reversal of polarity and in addition an automatic device shall be provided to cut off power in the event of reversal of polarity owing to wrong connections either at the switch board or at the electric generator terminals.

7. Oxygen and hydrogen gas pipes shall be painted with distinguishing colors. Whenever an hydrogen pipe is opened for repairs or any other work, on re-connection the pipe shall be purged of &I air before hydrogen is allowed to pass through that pipe :

8. Provided that after repairs, hydrogen pipes shall preferably be purged by an inert gas like nitrogen, whenever possible, before introducing hydrogen for final purging.

9. All electrical wiring and apparatus in the electrolyser tooth and hydrogen compression room shall be of flame-proof construction or enclosed in flame-proof fittings and no naked light or flame shall be allowed to be taken either in the electrolyser room or where compression and filling of the gases is carried on and such warning notices shall be exhibited in prominent places.

10. No part of the electrolyser plant and the gas-holders and compressor shall be subjected to welding, bracing, soldering or cutting until steps have been taken to remove any explosive substance from that part and render the part safe for such operations and after the completion of such operation no explosive substance shall

be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

11. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolysers unless the same is certified by the competent persons under whose direct supervision erection or repairs arc carried on to be in a safe condition and the terminals have been checked for The polarity as required by clause 7.

12. Every part of the electrolyser plant and the gas-holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

SCHEDULE -XVII

MANIPULATION OF STONE OR ANY OTHER MATERIAL CONTAINING FREE SILICA

1. **Application:-**

This Schedule shall apply to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on. This shall include the manufacturing processes pertaining to Stone Crushers, Gem and Jewelry, Slate Pencil Making, Agate Industry, Cement Industry, Pottery and Glass Manufacturing.

2. **Definitions**:- For the purpose of this Schedule -

(a) "manipulation" means crushing, breaking, chipping, dressing, grinding, sieving, mixing, grading or handling of stone or any other material containing free silica or any other operation involving such stone or material;

(b) "stone or any other material containing free silica" means a stone or any other solid material containing not less than 5 percent by weight of free silica.

3. **Preventive Control Measures:—**

No manipulation shall be carried out in a factory or part of a factory unless the following preventive control measures are adopted, namely:-

(1) Engineering Control Measures:

(a) Wet Methods:

(i) Airborne Silica Dust should be minimized or suppressed by applying water to the process or cleanup;

(ii) Water should be provided for drilling or sawing of concrete or masonry,

(b) Ventilation:

(i) An effective Local exhaust system should be provided and maintained to control/remove silica dust from industrial processes.

(ii) Dilution / ventilation may be used to reduce free silica dust concentration to below the permissible limits in large areas.

(iii) Dust collectors / High Efficiency Particle Air filter (HEPA) should be set up so that dust shall be removed from the source and all transfer points to prevent contaminating work areas.

(iv) Ventilation systems should be kept in good working conditions.

(c) Isolation:

(i) Containment methods should be used while carrying out sand blasting.

(ii) Cabins of vehicles or machinery cutting and drilling that might contain free silica should be enclosed and sealed.

(d) Dust Control:

(i) Vacuum System with High Efficiency Particle Air (HEPA) filter shall be used to remove dust from work areas and at all transfer points.

(ii) The belt conveyors transferring crushed material shall be totally enclosed throughout its length.

Provided that such control measures as above said are not necessary if the process or operation itself is such that the level of dust created and prevailing does not exceed the permissible limit of exposure specified in Rule 102.

(2) **Medical Control Measures**:

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include pulmonary function test and chest X ray -Posterior Anterior (PA) view to be compared with standard International Labour Organisation (I.L.O)Radiographs on Pneumoconiosis which shall be read by a radiologist specialized / trained in the said field.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre-employment except the chest X-ray which shall be carried out at least once in three years.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in

Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

(3) Administrative Control Measures:

(a) Work place / Environment Monitoring:

The occupier to ensure work place / environment monitoring to be performed to determine magnitude of exposure / concentration to evaluate engineering controls, selecting respiratory protection, work practices and the need for medical surveillance.

(i) Exposure / concentration measurements should be made in the Workers' actual breathing zone.
(ii) Total sampling time shall be at least seven hours.
(iii) Work place / Environment Monitoring shall be repeated quarterly.
(iv) The report of dust sampling by occupier shall be made available to the public.

(b) Training / Awareness:Workers shall be trained in the following:-

(i) Health effects of free silica dust exposure.

(ii) Operations and material that produce free silica dust hazards.

(iii) Engineering controls and work practice controls that reduce dust concentration.

(iv) The importance of good housekeeping and cleanliness.

(v) Proper use of personal protective equipment such as respirators etc.

(vi) Personal hygiene practices to reduce exposure.

(c) Maintenance of floors:

(i) All floors or places where fine dust is likely to settle on and whereon any person has to work or pass shall be of impervious material and maintained in such condition that they can be thoroughly cleaned by a moist method or any other method which would prevent dust being airborne in the process of cleaning once at least during each shift.

(ii) For this purpose dry sweeping or compressed air shall be used for cleanup of dust or wet methods or vacuum system with a High Efficiency Particle Air (HEPA) filter shall be used.

(iii) Dust on over head ledges and equipment should be removed before it becomes air borne due to vibration traffic and random air current.

(d) Change room and washing facilities:

(i) Washing and bathing facilities shall be conveniently located at a place easily accessible to the workers.

(ii) Cloak room with individual lockers shall be provided for workers to store uncontaminated clothing.

(iii) Workers shall take bath and change the work clothes before they leave the work site.

(iv) Work clothes shall not be cleaned by blowing or shaking.

(v) Eating/lunch areas shall be located away from exposed areas.

(e) Display of Notices:

(i) Warning signs / Posters shall be displayed conspicuously in a prominent place.

(ii) The Warning signs / Poster shall contain the Hazards and precautions to be taken.

(iii) The display of notice shall be in the local language and also in the language understood by the majority of the workers.

SCHEDULE -XVIII

HANDLING AND PROCESSING OF ASBESTOS, MANUFACTURE OF ANY ARTICLE OR SUBSTANCE OF ASBESTOS AND ANY OTHER PROCESS OF MANUFACTURE OR OTHERWISE IN WHICH ASBESTOS IS USED IN ANY FORM.

1. **Application:-** This Schedule shall apply to all manufacturing process involving handling, using or manipulation of Asbestos is carried on in a factory which may lead to exposure of workers to asbestos and/or product containing Asbestos.

2. The State Government may, at any time, for the purpose of giving effect to any scientific proof obtained from specialised institutions or experts in the field, by notification in the *Andhra Pradesh Government Gazette,* make suitable changes in the said schedule.

3. Notwithstanding anything mentioned in sub-paragraph (1), use of asbestos is prohibited in the manufacturing processes may be notified by the State Government in this behalf.

2. Definitions:- For the purpose of this Schedule:-

(a) "asbestos" means any fibrous silicate mineral and any admixture containing actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite or any mixture thereof, whether crude, crushed or opened;

(b) "asbestos textiles" means yarn or clothes composed of asbestos or asbestos mixed with any other materials;

(c) "approved" means approved for the time being in writing by the Chief Inspector-cum-Facilitator;

(d) "breathing apparatus" means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;

(e) "efficient exhaust draught" means a localised ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates;

(f) "preparing means crushing, disintegrating any other processes in or incidental to the opening or asbestos;

(g) "protective clothing" means overalls and head covering, which (in either case) will when worn exclude asbestos dust;

(h) "asbestos dust" means, airborne particles of asbestos or settled particles of asbestos which are liable to become airborne in the factory

(i) "airborne asbestos dust" means, for the purposes of measurement, dust particles measured by gravimetric assessment or other equivalent method;

(j) "repairable asbestos fibers" means asbestos fibers having diameter of less than 3 micrometer and a length to diameter ratio greater than 3:1'

(k) "exposure to asbestos" means exposure to airborne repairable asbestos fibers or asbestos dust; whether originating from asbestos or from minerals, materials or products containing asbestos in the factory.

3. Tools and equipment:-Any tools or equipment used in processes to which this schedule applies shall be suchthat they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.

4. Exhaust draught.-

(1) An effective exhaust draught shall be provided and maintained to control dust from the following processes and machines as per the relevant standard prescribed by the Bureau of Indian Standard:-

(a) manufacture and conveying machinery, such as

(i) preparing, grinding, or dry mixing machines;

(ii) carding, card waste and ring spinning machines, and looms;

(iii) machines or other plant fed with asbestos;

(iv) machines used for the sawing, grinding, turning, drilling, abrading or polishing, in the dry state of articles composed wholly or partly of asbestos;

(b) cleaning and grinding of the cylinders or other parts of a carding machine;

(c) chambers, hoppers or other structures into which looses asbestos is delivered or passes;

(d) work-benches for asbestos waste sorting or for other manipulation or asbestos by hand;

(e) workplaces at which the filling or emptying of sacks, skips or other portable containers,
weighing or other process incidental thereto which is effected by hand, is carried on;

(f) sack cleaning machines;

(g) mixing and blending of asbestos by hand; and

(h) any other process in which dust is given off into the work environment.

(2) Exhaust ventilation equipment provided in accordance with sub-paragraph (1) shall, while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any workplace.

(3) Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

(4) The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.

5. Testing and examination of ventilating systems:-

(1) All ventilating systems used for the purpose of extracting or suppressing dust as required by this schedule shall be as per the relevant standard prescribed by the Bureau of Indian Standards, examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of twelve months. Any defects found by such examinations or test shall be rectified forthwith.

(2) A register containing particulars of such examination and tests as shown in Form:EDE

and the state of the plant and the repairs or alterations, if any, found to be necessary shall be kept and shall be available for inspection by an inspector-cum-Facilitator.

6. Segregation in case of certain process:-

Mixing or blending of asbestos by the hand, or making or repairing of mattresses composed wholly or partly of asbestos shall not be carried on in any in which any room other work is done.

7. Storage and distribution of loose asbestos:-

All loose asbestos shall, while not in use be kept in suitable closed receptacles which prevent the escape of asbestos dust there from. Such asbestos shall not be distributed within a factory except in closed receptacles or in a totally enclosed system of conveyance.

8. Asbestos sacks:–

(1) All sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable materials and shall be kept in good repair.

(2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 5.

(3) Asbestos sacks or receptacles which contain asbestos shall be disposed off in a safe manner.

9. Maintenance of floors and workplaces.-

(1) In every room in which any of the requirements of this schedule apply -

(a) the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use; and

(b) the floors shall be kept free from any materials, plant or other articles not immediately required for the work carried on in the room, which would construct the proper cleaning of the floor.

(2) The cleaning as mentioned in sub-paragraph (1) shall so far as is practicable, as carried out by means of vacuum cleaning equipment so designed and constructed and so used that asbestos dust neither escapes nor is discharged in to the air of any work place.

(3) When the cleaning is done by any method other than that mentioned in sub-paragraph (2), the persons doing cleaning work and any other person employed in that room shall be provided with respiratory protective equipment and protective clothing.

(4) The vacuum cleaning equipment used in accordance with provisions of sub-paragraph (2), shall be properly maintained and after each cleaning operation, its surfaces kept in a clean state and free from asbestos waste and dust.

(5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occurring during the

course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

(6) (1) The occupier shall replace asbestos or of certain types of asbestos or products containing asbestos by other materials or products or shall use alternative technology, scientifically evaluated as harmless or less harmful, wherever is possible.

(2) The occupier shall take all the measures to prevent or control the release of asbestos in to the air and to ensure that the exposure limits or other exposure criteria are complied with and also reduce exposure to as low as a level as is reasonably practicable.

10. Breathing Apparatus, Personnel Protective Equipment and Clothing.-

(1) The occupier of every factory to which

this schedule applies shall provide to workers personnel protective equipments such as hand gloves, shoes, helmets, goggles, earplug, aprons, safety belt, overall suit, etc, as per the relevant standard prescribed by the Bureau of Indian Standards. The approved breathing apparatus and appropriate work clothing as per the relevant standard prescribed by the Bureau of Indian Standards in consultation with the workers representatives and maintained in good conditions for use of every person employed -

(a) in chambers containing loose asbestos;
(b) in cleaning, dust settling or filtering chambers of apparatus;
(c) in cleaning the cylinders, including the defer cylinders, or other parts of a carding machine by means of hand-stickles;
(d) in filling, beating or levelling in the manufacture or repair of insulating mattresses; and

(e) in any other operation or circumstances in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit.

(2) Suitable accommodation in conveniently accessible position shall be provided for the use of persons when putting on or taking off breathing apparatus and protective clothing provided in accordance with this schedule and for the storage of such apparatus and clothing when not in use.

(3) All breathing apparatus and protective clothing not in use shall be stored in the accommodation provided in accordance with sub-paragraph (2) above.

(4) All protective clothing in use shall be de-dusted under an efficient exhaust draught or by vacuum cleaning and shall be washed at suitable intervals. The cleaning schedule and procedure should be such as to ensure the efficiency in protective the wearer.

(5) All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once in every month by a responsible person.

(6) ‘(6). A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector-cum-Facilitator.

(7) No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.

(8) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed: in the proper use of that equipment.

(9) No worker shall take home any work clothing or special protective clothing or personal protective equipment provided him for protection against exposure to asbestos.

11. Separate accommodation for personal clothing:-

A separate accommodation shall be provided in a conveniently accessible position for all persons employed in operations to which this schedule applies for storing of personal clothing.

This shall be separated from to accommodation provided under sub-paragraph (2) of paragraph 11 to prevent contamination of personal clothing.

12. Washing and bathing facilities.-

(1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by this schedule, adequate washing and bathing places having a constant supply of water undercover at the rate of one such place for every 15 persons employed.

(2) The washing places shall have standpipes placed at intervals of not less than one metre.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided: Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector-cum-Facilitator.

(5) Sufficient supply of soap and nail brushes shall be provided.

13. Mess Room:-

There shall be provided and maintained for the use of all workers employed in the factory covered by this schedule, remaining on the premises during the rest intervals, a suitable mess room which shall be furnished with

(a) sufficient tables and benches with back rest; and

(b) adequate means for warming food.

14. Prohibition relating to smoking:-

No person shall smoke in any area where processes covered by this schedule are carried on. A notice in Telugu and the language understood by majority of the workers shall be posted in the plant prohibiting smoking at such areas.

15. Pictorial Cautionary notices:-

Cautionary notices in the form specified in appendix and printed in Telugu and the language easily read and understood by the majority of the workers shall be displayed in prominent places in the workrooms where asbestos or substances containing asbestos are manufactured, handled or used.

16. Air monitoring.-

To ensure the effectiveness of control measures in continuous or repetitive processes, the monitoring of asbestos fibres in air as well as personal monitoring of workers shall be carried out at least once in every shift and the result so obtained shall be entered in register and

(a) there shall be no substantial change in workplace conditions;
(b) the results of the two (2) preceding measurements have not exceeded half the relevant control limit.
(c) all factories should adopt membrane filter test as per the relevant standard prescribed by the Bureau of Indian Standards without fail.

Explanation.- "Membrane Filter Test" is defined as the method of determination of airborne asbestos fiber concentration in work environment by light microscopy (Membrane Filter Method).

18. Medical Facilities and Records: -

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include pulmonary function test, tests for detecting asbestos fibers in sputum and chest X ray.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment except the chest X-ray which shall be carried out at least once in three years.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CFgranted by the Health Surveillance officer. If the Health Surveillance officer declares

a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

(19)Exemptions: Exemptions:- If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate of writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

SCHEDULE -XIX

FORGING, FORMING, HEAT TREATMENT AND INCIDENTAL PROCESSES

1. Application

The schedule shall apply to all types of operations involved in Forging, Forming, Heat Treatment and other incidental processes.

2. Definition

For the purpose of this Schedule,

(a) "approved" means approved by the Chief Inspector-cum-facilitator;

(b) “Forming” includes all kinds of manufacturing processes involving the application of force by power press, rollers etc.,

(c) “Heat treatment” includes annealing, normalizing, hardening, tempering,

marquenching, ausforming, carburizing, nitriding etc.,

(d) "fixed fencing" means fencing provided for the tools of a power press being fencing which has no moving part associated with or dependent upon the mechanism of a power press and includes that part of a closed tool which acts as a guard;

(e) "power press" means a machine used for moulding, pressing, blanking, raising, drawing and similar purposes;

3. Starting and stopping mechanism

(1) The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of the press.

(2) Suitable arrangements shall be made to arrest the movement of ram during power failure, changing of dies, tool setting and other maintenance work etc.

4. Safety provisions on power press

(1) Each power press shall be provided with suitable fixed fencing on all sides so as to safeguard the workers engaged nearby.

(2) The design, construction and mutual position of the safeguards referred to in sub paragraph (1) shall be such as to preclude the possibility of the workers hand or fingers reaching the danger zone.

(3) The machine shall be fed through suitable means so as to ensure the safety of the workers.

(4) Notwithstanding anything contained in sub-paragraph (1) an automatic or an inter-locked guard with photo-electric sensors, proximity sensors etc, may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defect, the power press shall not be operated unless the defect of the guard is removed.

5. Appointment of persons to prepare power presses for use

(1) Except as provided in paragraph 6, no person shall set, re-set, adjust or try out the tools on a power press or install or adjust any safety device thereon, being installation or adjustment preparatory to production of (to proving, or carry out an inspection and test of any safety device thereon required by paragraph 8 unless he –

(a) has attained the age eighteen;

(b) has been trained in accordance with the sub-paragraph (2) ; and

(c) has been appointed by the Occupier of the Factory to carry out those duties in respect of the class or description of power press or the class or description of safety device to which the power press or the safety device (as the case may be) belongs;

(3) The training shall include suitable and sufficient practical instruction in the matters in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.

6. Examination and testing of power-presses and safety devices

(1) No power press or safety device shall he taken into use in any Factory for the first time in that factory or in case of a safety device for the first time on any power press, unless it has been thoroughly examined and tested, in the case of a power press, after installation in the factory, or in the ease of a safety device, when in position on the power press in connection with which it is to be used.

(2) No power press shall be used unless it has been thoroughly examined and tested by a competent person, within the immediately preceding period of twelve months.

(3) No power press shall be used unless every safety device (other than fixed fencing) thereon has within the immediately preceding six months when in position on that power press been thoroughly examined and tested by a competent person.

(4) The competent person carrying out an examination and test under the foregoing provisions shall make a report of the examination and test containing the following particulars and every such report shall be kept readily available for inspection, namely:

(a) name of the occupier of the Factory;

(b) address of the Factory;

(c) identification number or mark sufficient to identify the power press or the safety device;

(d) date on which the power press or the safe device was first taken into use in the Factory;

(e) the date of each periodical thorough examination carried out as per requirements of sub-paragraph (2) above;

(f) particulars of any defects affecting the safe working of the power press or the safety device found at any such thorough examination and steps taken to remedy such defects.

7. Defects disclosed during a thorough examination and tests

(1) Where any defect is disclosed in any power press or in any safety device by any examination and test under paragraph 6 and in the opinion of the competent person carrying out the examination and test, either

(a) the said defect is a cause of danger to worker sand in consequence the power press or safely device (as the case may be) ought not to be used until the said defect has been remedied ; or

(b) the said defect may become a cause of danger to workers and in consequence the power press or the safety device (as the case may be)ought not to be used after the expiration of a specified period unless the said defect has been remedied ; such defect shall, as soon as possible after the completion of the examination and test, be notified in writing by the competent person to the occupier of the Factory and, in the case of a defect falling within clause (b) of this paragraph such notification shall include the period within which, in the opinion of the competent person, the defect ought to be remedied.

(2) In every case where notification has been given under this paragraph, a copy of the report made under sub-paragraph (4) of paragraph 6 shall be sent by the competent person to the Inspector-cum-facilitator for the area within fourteen days of the completion of the examination and test.

(3) Where any such defect is notified to the Occupier in accordance with the foregoing provisions of this paragraph the power press or safety device (as the case may be) having the said defect shall not be used

(a) In the case of a defect falling within clause (a) of sub-paragraph (1) until the said defect has been remedied; and

(b) In the case of defect falling within clause (b) of sub-paragraph (1), after the expiration of the said defect has been remedied.

(4) As soon as is practicable after any defect of which notification has been given under sub-paragraph (1) has been remedied, are cord shall be made by or on behalf of the occupier stating the measures by which and the date on which the defect was remedied.

8. Inspection and test of safety devices

(1) No power press shall be used after the setting, resetting or adjustment of the tools thereon unless a person appointed or authorised for the purpose under paragraph 5 has inspected and tested every safety device thereon whack is in position on the said power press;

Provided that an inspection, test and certificate as aforesaid shall not be required where any adjustment of the tools has not caused or resulted in any alteration to or disturbance of any safety device on the power press and if, after the adjustment of the tools, the safety devices remain, in the opinion of such a person as aforesaid, in efficient working order.

(2) Every power press and every safety device thereon while it is in position on the said power press shall be inspected and tested by a trained person every day.

9. Defects disclosed during an inspection and test

(1) Where it appears to any person as a result of any inspection and test carried out by him under paragraph 8 that any necessary safety device is not in position or is not properly in position on a power press or that any safety device which is in position on a power press is not in his opinion suitable, he shall notify the occupier forthwith.

(2) Except as provided in sub-paragraph (3) of this paragraph where any defect is disclosed in a safety device by any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the Occupier forthwith.

(3) Where any defect in a safety device is the subject of a notification in writing under paragraph7 by virtue of which the use of the safety device may be continued during a specified period without the said defect having been remedied, the requirement in sub-paragraph (2) of this paragraph shall not apply to the said defect until the said period has expired.

10. Identification of power presses and safety devices

For the purpose of identification every power press and every safety device provided for the same shall be distinctively and plainly marked.

11. S**afety precautions in forging and rolling operations:**

(1) Workers shall be provided with suitable personal protective equipment to prevent burns from contact with hot surfaces or splatters of hot material.

(2) Material handling equipments involved in forging and rolling operations shall be of adequate strength, size and suitable shape.

(3) Substantial safeguards shall be provided to ensure the safety of the persons employed in forging and rolling operations from the flying scales, splatter and other materials.

(4) No process or work shall be carried on in such a manner as to cause risk of bodily injury to the persons employed.

12. Precautions against ignition

Wherever there is danger of fire from accumulation of flammable or explosive dust, fumes or vapours or any combustible materials in air:-

(a) all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent; and

(c) all other precautions as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces etc.,

(d) safe level of quenching medium shall be ensured in the heat treatment furnaces.

(e) alternate power supply arrangements shall be made and interlocked with the normal power supply system so as to ensure constant supply of power during quenching operations.

13. Training and Instructions to operators

The operators shall be trained and instructed in the safe method of work before starting work on any power press.

14. **Ventilation**

Efficient ventilation shall be provided by mechanical means and shall operate on the dust, fumes or smoke given off in the process as near as may be at the point of origin. The ventilation system shall be so constructed, arranged and maintained as to prevent the dust, fumes or smoke entering into any room or place in which work is carried on.

15. Testing and examination of ventilating systems:-

(1) All ventilating systems used for the purpose of extracting or suppressing fumes as

required by this schedule shall be as per the relevant standard prescribed by the Bureau of Indian Standards. It shall be thoroughly examined and tested by a competent person once in every period of twelve months. Any defects found by such examinations or test shall be rectified forthwith.

(2) A register containing particulars of such examination and tests and the state of the plant and the repairs or alterations, if any, found to be necessary shall be kept and shall be available for inspection by an Inspector-cum-Facilitator.

16. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in health register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE -XX

HANDLING AND MANIPULATION OF CORROSIVE SUBSTANCES

1.Without prejudice to the provisions contained in schedule XVI, this Schedule shall apply in respect of all factories or any part thereof in which handling and manipulation of Corrosive substances is carried on.

2. Definitions

For the purpose of this Schedule

(a) "Corrosive operation" means any manufacturing process, storing, handling, processing, packing or using any corrosive substance in a factory.

(b) "Corrosive substance" includes sulphuric acid, nitric acid, hydrochloric acid, hydrofluoric acid, carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, ammonia, sodium hydroxide and potassium hydroxide and a mixture thereof, and any other substance which the State Government by notification in the Official Gazette specify to be corrosive substance.

3. Flooring

The floor of every workroom of a factory in which corrosive operation is carried on shall be made of impervious, corrosion and fire resistance material and shall be so constructed as to prevent collection of any corrosive substance. The surface of such flooring shall be smooth and cleaned as often as necessary and maintained in a sound condition.

4. Protective equipment

(a) The occupier shall provide for the use of all persons employed in any corrosive operation suitable protective wear for hands and feet, suitable aprons, face shields, chemical safety goggles and respirators. The equipments shall be maintained in good order and shall be kept in clean and hygienic condition by suitably treating to get rid of the ill-effects of any absorbed chemicals and by disinfecting. The occupier shall also provide suitable protective creams and other preparations wherever necessary.

(b) The protective equipment and preparations provided shall be used by the persons employed in any corrosive operations.

5. Water facilities

Where any corrosive operation is carried on, there shall be provided as close to the place of such operation as possible, a source of clean water at a height of 210 cm. (7 feet) from a pipe 1.25 cm. (1/2 inch) diameter and fitted with a quick acting valve so that in case of injury to the worker by any corrosive substance the injured part can be thoroughly flooded with water. Whenever necessary, in order to ensure continuous watts supply, a storage tank having minimum length, breadth and height of 210 cm, 120 cm., and 60 cm. respectively or such dimensions as are approved by the Chief Inspector-cum-Facilitator shall be provided as the source of clean water.

6. Cautionary notice

A cautionary notice in the following form and printed in the language which is understood by majority of the workers employed, shall be displayed prominently and close to the place where any corrosive operation is carried out and where it can be easily and conveniently read by the worker. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed. Corrosive substances cause severe burns and the vapors thereof, may be extremely hazardous. In case of contact, immediately flood the part affected with plenty of water for at least 15 minutes.Get medical-attention quickly.

7. Transport

(a) Corrosive substances shall not be filled, moved or carried except in containers or through pipes and when they are to be transported in containers, they shall be included in crates of sound construction and of sufficient strength.

(b) a container with a capacity of 11.5 liters (2- 1/2 gallons) or more of a corrosive substance shall be placed in receptacle or crate and then carried by more than one person at a height below the waist line unless a suitable rubber wheeled truck is used for the purpose.

(c) Containers for corrosive substance shall be plainly labeled.

8. Devices for handling corrosives

(a) Tilting, lifting or pumping arrangements shall be used for emptying jars, carboys and other containers of corrosives.

(b) Corrosive substances shall not be handled by bare hands but shill be handled by means of a suitable scoop or other device.

9. Opening of valves

Valves fitted to containers holding a corrosive substance shall be -opened with great care. If they do not work freely, they shall not be forced open. They shall be opened by a worker suitably trained for that purpose.

10. Cleaning tanks, stills, etc

(a) In cleaning out or removing residues from stills or other large chambers used for holding any corrosive substance, suitable implements made of wood or other material shall be used to prevent production of arseniuretted hydrogen (Arsine).

(b) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter chamber, tank, vat, pit or other confined space where a corrosive substance had been stored, all possible precautions shall be taken to ensure the worker's safety.

(c) Wherever possible, before repairs arc undertaken to any part of equipment in which a corrosive substance was handled, such equipment or part thereof shall be freed of any adhering corrosive substance by adopting suitable methods.

11. Storage

(a) Corrosive substances shall not be stored in the same room with other chemicals, such as turpentine, carbides, metallic powders and combustible materials, the accidental mixing with which may cause a reaction which is either violent or gives rise to toxic fumes and gas.

(b) Pumping or filling overhead tanks, receptacles, vats or other containers for storing corrosive substances shall be so arranged that there is no possibility of any corrosive substance overflowing and causing injury to any person.

(c) Every container having a capacity of twenty liters or more on every pipe line, valves, and fitting used for storing or carrying corrosive substances shall be thoroughly examined every year for finding out any defects and defects shall be removed forthwith. A register shall be maintained of every such examination made and shall be produced before the Inspector-cum-Facilitator-cum-Facilitator whenever required.

12. Fire extinguishers and fire-fighting equipment

An adequate number of suitable type of fire extinguishers or other firefighting equipment, depending on the nature of chemicals stored shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other equipment should be used printed in the language which majority of the workers employed understand, shall be affixed near each extinguisher or ether equipment.

SCHEDULE -XXI

MANUFACTURE OR MANIPULATION OF CARCINOGENIC DYE INTERMEDIATES

1. Application:- The Schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraphs 3 and 4 are formed, manufactured, handled, or used and the processes incidental thereto in the course of which these substances are formed are carried on. The process indicated in this paragraph shall be referred to hereinafter as "the said process", and such a reference shall mean any or all the processes described in this paragraph.

2. Definitions:- For the purpose of this Schedule the following definitions shall apply, unless the context otherwise requires:

(a) "controlled substances" means chemical substances mentioned in paragraph 7 of this Schedule.

(b) "efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught, shall be deemed to be efficient which fails to remove smoke generated at the point where such gas,vapour, fume or dust originated

(c) "first employment" means first employment in the said processes and also re-employment in such processes following any cessation of employment for a continuous period exceeding three calendar months.

(d) "prohibited substances" means chemical substances mentioned in paragraph 3 of this Schedule.

3. Prohibited substances:- For the purpose of this Schedule, the following chemical substances shall be classified as "prohibited substances" except when these substances are present or are formed as a by-product of a chemical reaction in a total concentration not exceeding one per cent:-

(a) Beta-naphthylamine and its salts,

(b) Benzidine and its salts,

(c) 4-amino diphenyl and its salts,

(d) 4-nitro diphenyl and its salts, and

(e) any substance containing any of these compounds.

4. Controlled substances:- For the purpose of this Schedule, the following chemical substances shall be classified as controlled substances namely:-

(a) Alpha naphthylamine or alpha naphthylamine containing not more than one per cent of beta naphthylamine either as by-product of chemical reaction or otherwise, and its salts.

(b) Ortho-tolidine and its salts.

(c) Dianisidine and its salts.

(d) Dichlorobenzidine and its salts.

(e) Magneta.

5. Prohibition of employment:- No person shall be employed in the said process in any factory in which any prohibited substance is formed, manufactured, processed, handled or used except as exempted by the Chief Inspector as stipulated in paragraph 23.

6. Requirements for processing or handling controlled substances:-

(1) Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used, all practical steps shall be taken to prevent inhalation, ingestion or absorption of the said controlled substance, by the workers while engaged in processing that substance and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

(2) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

(3) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when those substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labelled to indicate the contents.

7. Personal protective equipment:-

(1) The following items of personal protective equipment shall be provided and issued to every worker employed in the said process:-

(a) long trousers and shirts or overall with full sleeves and head coverings. The shirt or over all shall cover the neck completely.

(b) Rubber-gum-boots.

(2). The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said processes when there is danger of injury during the performance of normal duties or in the event of emergency:-

(a) Rubber hand-gloves

(b) rubber aprons

(c) Airline respirators or other suitable respiratory protective equipment.

(3) It shall be the responsibility of Manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.

8. Prohibition relating to employment of women and young persons.- No woman or young person shall be employed or permitted to work in any room in which the said manufacturing processes are carried on.

9. Floors of work room:- The floor of every work in which the said manufacturing processes are carried on shall be (a) smooth and impervious to water provided that asphalt or tar shall not be used in the composition of the floor, (b) maintained in a state of good repair, (c) with a suitable slope for easy draining and provided with gutters and (d) thoroughly washed dailywith the drain water being led into a sewer through a closed channel.

10. Disposal of empty container:- Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.

11. Manual handling:- Controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily.

12. Instructions regarding risk:- Every worker on his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed about the measures to be taken to deal with an emergency.

13. Cautionary placards:- Cautionary placards in the Form specified in Appendix attached to this Schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be easily and conveniently read by the workers. Arrangements shall be made by the manager to instruct periodically and such workers regarding the precautions contained in the cautionary placards.

14. Medical facilities and records of examinations and tests:

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include pulmonary function test, tests for detecting asbestos fibers in sputum and chest X ray.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment except the chest X-ray which shall be carried out at least once in three years.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HRin Form --- which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CFin Form -----granted by the Health Surveillance officer. If the Health

Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

15. Obligation of the workers..- It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including exfoliative cytology of urine by the certifying Surgeon or the qualified medical practitioner as provided for under these rules.

16. Washing and bathing facilities..-

(1) The following washing and bathing facilities shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said processes namely:-

(a) A wash place under cover having constant supply of water and provided with clean towels, soap and hair brushes and with at least one stand pipe for every such worker.

(b) 50 percent of the stand pipes provided under clause (a) shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter.

(c) The washing and bathing facilities shall be in close proximity of the area housing the said processes.

(d) Clean towels shall be provided individually to each worker.

(e) In addition to the taps mentioned under clause (a) one stand pipe, in which warm water is made available, shall be provided on each floor.

(2) Arrangements shall be made to wash factory uniforms and other work clothes every day.

18. Food, drinks, etc., prohibited in work room:- No worker shall consume foods, drink, pan, supari or tobacco or shall smoke in any work room in which the said processes are carried on and no worker shall remain in such room during intervals for meals or rest.

19. Cloak room:- There shall be provided and maintained in a clean state and in a good repair for the use of workers those employed in the said processes (a) a cloak room with lockers having two compartments one for street clothes and. the other for work clothes and (b) a place separate from the locker room and from the mess room for the storage of protective equipment provided under paragraph 7. The accommodation so provided shall be under the case of a responsible person and shall be kept clean.

20. Mess room:- There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during the meal intervals, a mess room which shall be furnished with tables and benches and provided with suitable means for warming food.

21. Time allowed for washing:- Before the end of each shift thirty minutes shall be allowed for bathing for each worker who is employed in the said processes. Further, at least ten minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.

22. Restriction on age of persons employed:- No worker under the age of forty years shall be engaged in the factory in the said processes for the first time after the date on which the Schedule comes into force.

23. Exemptions regarding prohibited substances:-

(1)The Chief Inspector may by a certificate in writing (which he may at his discretion revoke at any time) subject to such conditions, if any, as may be specified therein, exempt any process in the course of which any of the prohibited substances is formed, processed, manufactured, handled, or used from the provisions of paragraph 5 if he is satisfied that the process is carried out in a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater than that required for the purpose of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.

(2) The Chief Inspector may allow the manufacture, handing or use of benzidine hydrochloride provided that all the processes in connection with it are carried out in a

totally enclosed system in such a manner that no prohibited substance other than benzidine hydrochloride is removed therefrom except in quantities no greater than that required for the purpose of control of the processes or such purposes as is necessary to ensure that the product is free from prohibited substances and that adequate steps are taken to ensure that benzidine hydrochlorides is except while not in a totally enclosed system, kept wet with not less than one part of water to two parts of benzidine hydrochloride at all times.

24. General Exemption. If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons, all or any of the provisions of this Schedule are not necessary for the protection of the workers in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

APPENDIX
Cautionary Placard/Notice
[See Paragraph 13]

1. Dye intermediates which are nitro or amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.

2. Use the various items of protective wear to safeguard your own health.

3. Maintain scrupulous cleanliness at all times, thoroughly wash hands ad feet before taking meals. It is essential to take a bath before leaving the factory.

4. Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, move the contaminated clothing immediately. These chemicals are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

5. Handle the dye intermediates only with long handled scoops, never with bare hands.

6. Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.

7. Keep your food and drinks away from work place. Consuming food, drinks or tobacco in any form at the place of work is prohibited.

8. Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, clothes, machinery and equipment.

SCHEDULE- XXII

PROCESS OF EXTRACTING OILS AND FATS IN SOLVENT EXTRACTION PLANTS

1. Definitions

(a) "Competent Person " is a Graduate in Mechanical Engineering or Chemical Technology with specialized knowledge of Oils and Fats and with a minimum experience of five (5) years in a solvent extraction plant shall be considered to be a competent person:

Provided further that the State Government may accept any other qualifications, if in its opinion, they are equivalent to the qualifications aforesaid ;

(b) “Flame-proof enclosure as applied to electrical machinery or apparatus means an enclosure that will withstand, when covers or other access doors are properly secured, an internal explosion of the inflammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating the internal inflammation (or explosion) to the external flammable gas or vapour.

(c) "Solvent " means an inflammable liquid such as Pentane and Hexane and Heptane used for the extraction of vegetable oils;

(d) “Solvent Extraction Plant ", means a plant in which the process of extracting oils and fats by the use of solvents is carried on.

2. Location and lay out

(a) No solvent extraction plant shall be permitted to be constructed or extended within a distance of thirty meters from the nearest residential locality.

(b) A continuous wire fencing shall be provided around the solvent extraction plant up to a minimum distance of 15 meters from the plant and the fencing so provided shall be not less than 1.5 meters in height.

(c) No person shall be allowed to carry any matches or an open flame or fire inside the area bound by the fencing.

(d) Boiler houses and other buildings where open flame processes are carried on shall be located at least thirty meters away from the solvent extraction plant.

(e) If godowns and preparatory processes are within a distance of thirty meters from the solvent extraction plant, these shall be at least fifteen meters distance from the plant, and a continuous barrier wall of non-combustible material of a height of 1.5 meters from ground level shall be erected at a distance of not less than fifteen meters from the solvent extraction plant so that it extends to at least thirty meters of vapour travel around its ends from the plant to the possible sources of ignition.

3. Electrical Installation

(a) All electrical motors, electrical wiring system, the electric lamps, switches, circuit breakers and all other electrical equipment used within the premises of a factory where extraction of oil is being carried on with the help of solvents shall be of flame proof construction and should be suitable for use in areas where Hexane or similar types of solvents or vapors are likely to exist.

(b) All metal parts of the plant and building including various tanks and containers where

solvents arc stored or are likely to be present and all parts of electrical equipments not required to be energized shall be properly connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.

4. Restriction on smoking

Smoking shall be strictly prohibited within a distance of 15 meters from the solvent extraction plant. For this purpose 'No Smoking' signs shall be permanently displayed in the area.

5. Precautions against friction

(a) All tools and equipment including ladders, chains and other lifting tackle required to be used in the solvent extraction plant shall be of non-sparking type ;

(b) No machinery or equipment in any solvent extraction plant shall be belt driven unless the belt used is of such a type that it does not permit accumulation of static electricity to a dangerous level;

(c) No person shall be allowed to enter and work in the solvent extraction plant wearing clothes made of nylon or such other fiber that can generate static electrical charge or wear footwear which is likely to cause sparks by friction.

6. Fire-fighting apparatus

(a) An adequate number of portable fire extinguishers suitable for use against flammable liquid fire shall be provided in the solvent extraction plant;

(b) An automatic water spray sprinkler system on a wet pipe or open head deluge system with a sufficient supply of storage water shall be provided over the solvent extraction plant and throughout the building housing such plant.

7. Precautions against power failure

Provision shall be made for the automatic cutting off of steam in the event of power failure and also for emergency overhead water supply for feeding water by gravity to condensers which shall come into play automatically upon a power failure.

8. Magnetic separators

Oil-cake shall be fed to the extractor by a conveyor through a hopper and a magnetic separator shall be provided to remove any piece of iron during its transfer.

9. Venting

(a) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.

(b) All emergency relief vents shall terminate at least six meters above the ground and be so located that the vapors will not re-enter the building in which the solvent extraction plant is located.

10. Waste-water

Process waste water shall be passed through a flash evaporator to remove any solvent before it is discharged into a sump which should be located within the fenced area but

should not be closer than eight meters to the fence.

11. Ventilation

The solvent extraction plant shall be well ventilated and if the plant is housed in a building, the building shall be provided with mechanical ventilation with provision for at least six air changes per hour.

12. House-keeping

(a) Solvent shall not be stored in an area covered by the solvent extraction plant except in small quantities which shall be stored in approved safety cans;

(b) Waste materials such as oily rags, other wastes and absorbents used to wipe off solvent and paints and oils shall be deposited in approved containers and removed from the premises at least once a day ;

(c) Space with the solvent extraction plant and within 15 meters from the plant shall be kept free from any combustible materials and any spills of oils or solvent shall be cleaned up immediately.

13. Examination and repairs

(a) The solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector-cum-Facilitator with his observation as to whether or not the plant is in safe condition to work ,

(b) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.

(c) Facility shall be provided for purging the plant with inert gas or steam before opening for cleaning or repairs and before introducing solvent after repairs.

14. Operating personnel

The operation of the plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.

15. Vapour detection

A suitable type of flame- proof and portable combustible gas indicator shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various locations as approved by the Chief Inspector-cum-Facilitator shall be drawn out and entered in a register maintained for the purpose.

SCHEDULE- XXIII

CARBON DISULPHIDE PLANTS

1. Application

This Schedule shall apply to all electric furnaces in which carbon disulphide is

generated and all other plants where carbon disulphide, after generation is condensed, refined and stored.

These rules are in addition to and not in derogation of any of the provisions of the Act and the rules made thereunder.

2. Construction, installation and operation

(a) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time.

(b) Every electric furnace and every plant in which carbon disulphide is condensed, refined and stored with all their fittings and attachments shall he of good construction, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected and shall be so designed that carbon disulphide liquid and gas are in closed system during their normal working.

(c) The electric furnace supports shall be firmly grouted about 61 centimeters in concrete or by other effective means.

(d) Every electric furnace shall be instilled and operated according to manufacturers' instructions and these instructions shall be clearly imparted to the personnel in charge of construction and operation.

(e) The instructions regarding observance of correct furnace temperature, sulphur dose, admissible current/power consumption and periodical checking of charcoal level shall be strictly complied with.

3. Electrodes

(a) Where upper ring electrodes made of steel or used in the electric furnace, they shall be of seamless tube construction and shall have arrangement for being connected to cooling water system through a siphon builts in the electrodes or through a positive pressure water-pump.

(b) The arrangement for cooling referred to in clause (a) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4. Maintenance of charcoal level

When any electric furnace is in operation, it shall be ensured that the electrodes are kept coveted with charcoal bed.

5. Charcoal separator

(a) Cyclone type of charcoal separator shall be fitted on the off take pipe between the electric furnace and sulphur separator to prevent entry of pieces of char-coal into the condensers and piping.

(b) Any other design for gas off take pipe which dues tic• allow charcoal pieces into the condensers and piping may be adopted.

6. Rupture Discs and Safety Seal

(a) At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

(b) A safety water seal shall be provided at the best possible location to ensure the maximum and effective operation of the rupture discs mentioned in (a) above.

7. Pyrometer and Manometers

(a) Each electric furnace shall be fitted with adequate number of pyrometers Ito give an indication of the temperature as correctly as reasonably practicable at various points in the furnace. The dials for reading the temperature shall be located in the control room.

(b) Manometers or any other suitable devices shall be provided for indicating pressure

(i) in the off take pipe before and after the sulphur separator ; and

(ii) in primary and secondary condensers.

8. Check Valves or Water Seals

All piping carrying carbon disulphide shall be fitted with check valves or water seals at suitable positions so as to prevent gas from flowing back into any electric furnace in the event of its shut down.

9. Inspection and maintenance of Electric Furnaces

(a) Every electric furnace shall be inspected internally by a competent person

(i) before being placed in service after installation:

(ii) before being placed in service after reconstruction or repairs ; and

(iii)periodically every time the furnace is opened for cleaning or (or replaced electrodes.

In respect of item (iii) if it is felt by operators that during dashing it is not necessary to inspect internally so as to conserve the heat in the furnace, internal inspection can be done away with.

(b) When an electric furnace is shut down for cleaning,

(i) if removal of any part of the lining is resorted to, the condition of the shell shall be closely inspected, and

(ii) any plates forming shell found corroded to the extent that safety of the furnace is endangered shall be replaced:

10. Maintenance of Records

The following hourly records shall be maintained in a logbook

(i) Manometer reading at the points specified in clause (b) of rule 7.

(ii) Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers.

(iii) Water temperature and flow of water through the siphon in the electrodes.

(iv) Primary and secondary voltages and current and energy consumed.

11. Electrical apparatus, wiring and fittings

All buildings in which carbon disulphide is refined or stored shall be provided with electrical apparatus, wiring and fittings which shall afford adequate protection from fire and explosion.

12. Prohibition relating to smoking

No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored, and a notice in the language under-stood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light of other means of producing naked light or spark into such rooms.

13. Means of escape

Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear Mall obstructions and so designed as to afford easy passage.

14. Warnings In case of fire

There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electricity and, in case of failure of electricity, by some mechanical means.

15. Firefighting equipment

(a) Adequate number of suitable fire extinguishers or other fire-fighting equipment shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored:

(b) Clear instructions as to how the extinguishers or other equipment should be used shall be printed in the language which the majority of the workers employed understand. The instructions shall be affixed to each extinguisher or other equipment and the personnel trained in their use shall be supplied with the instructions.

16. Bulk sulphur

(a) Open or semi-enclosed space for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotive, etc., and precautions shall be taken to see that flames, smoke and matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

(b) All enclosures for bulk sulphur shall be of non-combustible construction, adequately

ventilated and so designed as to provide a minimum of ledges on which dust may lodge.

(c) The bulk sulphur in the enclosures shall be handled in such a manner as to minimize the formation of dust clouds and no flame, smoke and matches or other sources of ignition shall be employed during handling and non-sparking tools shall be used whenever sulphur is shovelled or otherwise removed by band.

(d) No repairs involving flames, beat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.

17. Liquid sulphur

Open flames, electric sparks and other sources of ignition, including smoke and matches, shall be excluded from the vicinity of molten sulphur.

18. Training and supervision

(a) All electric furnaces and all plants in which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.

(b) Workers in charge of operation and maintenance of electric furnaces and the plants shall be properly qualified and adequately trained.

19. Washing facilities

The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed a wash-place under cover with atleast one tap or stand-pipe, having a constant supply of clean water for every five such persons, the taps or stand-pipes being spaced not less than 120 centimeters apart with a sufficient supply of soap and clean towels, provided that towels shall be supplied individually to each worker if so ordered by the Inspector-cum-Facilitator. All the workers employed in sulphur storage handling and inching operations shall be provided with a nail brush.

20. Personal Protective equipment

(a) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and foot-wear shall be provided for the use of operatives:

(i) when operating valves or cocks controlling fluids, etc.

(ii) drawing off of molten sulphur from sulphur pots, and

(iii) handling charcoal or sulphur.

(b) Suitable respiratory protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

(c) Arrangements shall be made for the proper and efficient clearing of all such protective equipment.

21. Cloak-rooms

There shall be provided and maintained for the use of all persons employed in the processes a suitable cloak-room for clothing put off during work hours and a suitable place separate from the cloak-room for the storage of overalls or working clothes The

accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22. Unauthorized persons

Only maintenance and repair personnel, persons directly connected with the plant operation and those accompanied by authorised persons shall be admitted into the plant.

SCHEDULE -XXIV

MANUFACTURE OR MANIPULATION OF DANGEROUS PESTICIDES

1. Application

This schedule shall apply in respect of all factories or any part thereof in which the process of manufacture or manipulation of dangerous pesticide thereinafter referred to as the said manufacturing process) is carried on.

2. Definition

For the purpose of this schedule

(a) "dangerous pesticides" means any product proposed or used for controlling, destroying or repelling any pest or for preventing growth or mitigating effects of such growth including any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made there under and any other products as may be notified from time to time by the State Government;

(b) "manipulation" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling ;

(c) "efficient exhaust draught" means localized mechanical ventilation for removal of smoke, gas, vapour dust, fume or mist so as to prevent them from escaping into the air of any workroom in which work is carried on. No exhaust draught shall be considered efficient if it fails to remove smoke generated at the point where such gas, fume, dust, vapour or mist originates from the processes;

(d) "first employment" shall mean first employment in any manufacturing process to which this schedule applies and shall also include re-employment in the said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months ; and

3. Instruction to workers

Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemicals handled in the said manufacturing process and the hazards involved. The employees shall also be instructed in the measures to be taken to deal with any emergency. Such instructions shall be repeated periodically.

4. Cautionary notice and placards

Cautionary notices and placards in the form specified in the Appendix to this

Schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing proem and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for protecting health of the workers.

5. Food, drink and smoking prohibited

(1) No food, drink, tobacco, pan or supari shall be brought into or consumed by any worker in any workroom in which the said manufacturing process is carried out.

(2) Smoking shall be prohibited in any workroom in which the said manufacturing process is carried out.

6. Protective clothing and protective equipment

(1) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head coverings shall be provided for all workers employed in the said manufacturing process.

(2) (a) Protective equipment consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators shall be provided for all workers employed in the said manufacturing process.

(b) Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.

(3) Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.

(4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides.

(5) Protective clothing and equipment shall be maintained in good repair.

7. Floors and work-benches

(1) Floors in every work-room where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2) Floor shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe.

(3) Work-benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

8. Spillage and waste

(1) If a dangerous pesticide during its manipulation splashes or spills on the work-bench, floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas or articles.

(2) Cloth, rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in a suitable receptacle with tight fitting cover. Contaminated

waste shall be destroyed by burning at least once a week.

(3) Suitable deactivating agents, where available shall be kept in a readily accessible place for use while attending to a spillage.

(4) Easy means of access shall be provided to all parts of the plant for cleaning, maintenance and repairs.

9. Empty containers used for dangerous pesticides

Containers used for dangerous pesticides shall be thoroughly cleaned of their content and treated with an inactivating agent before being descended or destroyed.

10. Manual handling

(1) A dangerous pesticide shall be required or allowed to be manipulated by and except by means of a long handled scoop.

(2) Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

11. Ventilation

(1) In every workroom or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.

(2) Unless the process is completely enclosed, the following operations during manipulation of a dangerous pesticide shall not be undertaken without an efficient exhaust draught

(a) emptying a container holding a dangerous pesticide;

(b) blending a dangerous pesticide;

(c) preparing a liquid or powder formulation containing a dangerous pesticide; and

(d) changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.

(3) In the event of a failure of the exhaust or draught provided on the above operation, the said operations shall be stopped forthwith.

12. Time allowed for washing

(1) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.

(2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.

13. Washing and bathing facilities

(1) There shall be provided and maintained in a dean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

(2) The washing places shall have stand pipes placed at intervals of not less than one meter.

(3) Not less than one half of the total number of washing places shall be provided with bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided :

Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector-cum-Facilitator.

(5) Sufficient supply of soap and nail brushes shall be provided.

14. Cloakroom

There shall be provided and maintained for the use of all workers employed in the factory where the said manufacturing process is carried on:

(a) a cloakroom for clothing put off during working hours with adequate arrangements for drying clothing, if wet and

(b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 7.

15. Mess-room

(1) There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, a suitable mess-room which shall be furnished with --

(a) sufficient tables and benches with back rest, and

(b) adequate means for warming food.

(2) The mess room shall be placed under the charge of a responsible person and shall be kept clean.

16. Manipulation not to be undertaken

Manufacture or manipulation of a pesticide shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector-cum-Facilitator.

17. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance

officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination in respect of Halogenated Pesticides, shall include tests for determination of the chemical in blood and in fat tissues, EEG abnormalities and memory tests, in respect of organo phosphorous compounds, such examination shall include test for depression of cholinesterase in plasma and red blood cells

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre-employment.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR- which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

APPENDIX

CAUTIONARY NOTICE

INSECTICIDES AND PESTICIDES

1. Chemicals handled in this plant are poisonous substances
2. Smoking, eating food or drinking, chewing tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.
3. Some of these chemicals maybe absorbed through skin and may cause poisoning.
4. A good wash shall be taken before meals.
5. A good bath shall be taken at the end of the shift.
6. Protective clothing and equipment supplied shall be used while working in this area.
7. Containers of pesticides shall not be used for keeping food stuffs.
8. Spillage of the chemicals on any part of the body or on the floor or work bench shall be immediately washed away with water.
9. Clothing contaminated due to splashing shall be removed immediately.
10. Scrupulous cleanliness shall be maintained in this area.
11. Do not handle pesticides with bare hands; use scoops provided with handle.
12. In case of sickness like nausea, vomiting, giddiness, the Occupier should be informed who will make necessary arrangements for treatment.
13. All workers shall report for the prescribed medical tests regularly to protect their own health.

SCHEDULE- XXV

MANUFACTURE, HANDLING AND USE OF BENZENE

1. Application

The provisions of this Schedule shall apply to all factories or parts thereof in which Benzene or substances containing Benzene are manufactured, handled or used.

2. Definitions

For the purpose of this Schedule,

(a) 'Substances containing benzene' means substances wherein benzene content exceeds 1 percent by volume;

(b) 'Substitute' means a chemical which is harmless or less harmful than benzene and can be used in place of benzene;

(c) 'Enclosed system' means a system which will not allow escape of benzene vapors to the working atmosphere;

(d) 'Efficient exhaust draught ' means localized ventilation effected by mechanical means for the removal of gases, vapors, dusts or fumes so as to prevent them from escaping into the air of any workroom. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapors, fumes or dusts originate.

3. Prohibition and substitution

(a) Use of benzene and substances containing benzene is prohibited in the following processes:

(i) Manufacture of varnishes, paints and thinners; and

(ii) cleaning and degreasing operations.

(iii) Benzene or substances containing Benzene shall not be used as a solvent or diluent unless the process in which it is used is carried on in an enclosed system or unless the process is carried on in a manner which is considered equally safe as if it were carried out in an enclosed system

(b) Where suitable substitutes are available, they shall be used instead of Benzene or substances containing Benzene. This provision, however, shall not apply to the processes specified in Appendix A.

(c) The Chief Inspector-cum-Facilitator may, subject to confirmation by the State Government, permit exemptions from the percentage laid down in clause 2 (a) and also from the provisions of sub-clause (b) temporarily under conditions and within limits of time to be determined after consultation with the employers and workers concerned.

4. Protection against inhalation

(a) The process involving the use of Benzene or substances containing Benzene shall as far as practicable, be carried out in an enclosed system;

(b) Where, however, it is not practicable to carry out the process in an enclosed system, to workroom in which Benzene or substances containing Benzene are used, shall be equipped with an efficient exhaust draught or other means for the removal of Benzene vapors to prevent their escape into the air of the workroom so that the concentration of Benzene in the air does not exceed 25 parts per million by volume or 80 mg/m3;

(c) Air analysis for the measurement of concentration of Benzene vapors in air shall be carried out every 8 hours or at such intervals as may be directed by the Chief Inspector-cum-Facilitator at places where process involving use of Benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of Benzene vapors in air as measured by air analysis, exceeds 25 parts per million by volume or 80 mg/m3 the Occupier shall forthwith report the concentration to the Chief Inspector-cum-Facilitator stating the reasons for such increase;

(d) Workers who for special reasons are likely to be exposed to concentration of Benzene in the air of the workroom exceeding the maximum referred to in clause (b) shall be provided with suitable respirators or face masks. The duration of such exposure shall be limited as far as possible.

5. Measures against skin contact

(a) Workers who are likely to come in contact with liquid Benzene or liquid substances containing Benzene shall be provided with suitable gloves, aprons, boots and where necessary, vapour-tight chemical goggles made of material not affected by Benzene or its vapors.

(b) The protective wear referred to in sub-clause (a) shall be maintained in good condition and inspected regularly.

6. Labelling

Every container holding Benzene or sub-stances containing Benzene shall have the word Benzene" and approved danger symbols clearly visible on it and shall also display information on Benzene content, warning about leaky and warning about inflammability of the chemical.

7. Improper use of Benzene

(a) The use of Benzene or substances containing Benzene by workers for cleaning their hands or their work clothing shall be prohibited;

(b) Workers shall be instructed on the possible dangers arising from such misuse.

8. Prohibition of consuming food, etc., in workrooms

No worker shall be allowed to store or consume food or drink in the workroom in which Benzene or substances containing Benzene are manufactured, handled, or used. Smoking and chewing tobacco or pan shall be prohibited in such workrooms.

9. Instruction as regards risks

Every worker on his first employment shall be fully instructed on the properties of Benzene or substances containing Benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with in an emergency.

10. Cautionary notices

Cautionary notices in the form specified in Appendix B and presented in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the workrooms where Benzene or substances containing Benzene are manufactured, handled or used.

11. Washing facilities, cloak-room and mess-room

In factories in which Benzene or substances containing Benzene are manufactured, handled or used, the Occupier shall provide and maintain in clean state and in good repair

(a) Washing facilities under cover of the standard of at least one tap for every 10 persons having constant supply of water with soap and a clean towel provided individually to each worker if so ordered by the Inspector-cum-Facilitator ;

(b) A cloak-room with lockers for each worker, having two compartments - one for street-clothing and one for work-clothing;

(c) A mess-room furnished with tables and benches with means for warming food, provided that where a canteen or other proper arrangements exist for the workers to take their meals, the requirements of mess-room shall be dispensed with.

13. Medical facilities au d records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include tests for detection of Phenol in urine and determination of urinary sulphide ratio and C.N.S. and Haemotologyical tests

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may

be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

APPENDIX -A

[See Clause 3(c)]

1. Production of Benzene
2. Process where Benzene is used for chemical synthesis.
3. Motor spirits (used as fuel)

APPENDIX- B

(See Clause 11)

(a) The hazards—

(i) Benzene and substances containing Benzene are harmful;

(ii) Prolonged or repeated breathing of Benzene vapors may result in acute or chronic poisoning;

(iii) Benzene can also be absorbed through skin which may cause skin and other diseases

(b) The preventive measures to be taken

(i) Avoid breathing of benzene vapors;

(ii) Avoid prolonged or repeated contact of benzene with the skin;

(iii) Remove benzene soaked or wet clothing promptly;

(iv) If any time you are exposed to high concentration of benzene vapors and exhibit the sign and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your occupier;

(v) Keep all the containers of benzene closed;

(vi) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor;

(vii) Maintain good house-keeping;

(c) The protective equipment to be used

(i) the respiratory protective equipment in places where benzene vapors are present in high concentration;

(ii) In emergency, use self-generating oxygen mask or oxygen or air cylinder masks;

(iii) Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.

(d) The first-aid measure to be taken in the case of acute benzene poisoning.

(i) Remove the clothing immediately if it is wetted with benzene.

(ii) If liquid benzene enters eyes, flush thoroughly for at least fifteen minutes with clean running water and immediately secure medical attention.

(iii) In case of usual exposure to benzene vapour, call a physician immediately. Until he arrives do the following

If the exposed person is conscious:

(a) Move him to fresh air in open;

(b) Lay down without a pillow and keep him quiet and warm.

If the exposed person is unconscious

(a) Lay him down preferably on the left side with the head low;

(b) Remove any false teeth, chewing gum, tobacco or other foreign objects which may be in his mouth;

(c) Provide him artificial respiration in case difficulty is being experienced in breathing;

(d) In case of shallow breathing or cyanosis (blueness of skin, lips, ears, finger nails beds) he should be provided with medical oxygen or oxygen carbondi oxide mixture. If needed, he should be given artificial respiration. Oxygen should be administered by a trained person only.

SCHEDULE -XXVI

MANUFACTURE OR MANIPULATION OF MANGANESE AND ITS COMPOUNDS

1. Definitions

For the purpose of this Schedule

(a) "Manganese Process" means processing, manufacture or manipulation of manganese or any compound of manganese or any ore or any mixture containing manganese.

(b) "First employment" means first employment in any manganese process and includes also re- employment in any manganese process following any cessation of employment for a continuous period exceeding 3 calendar months ;

(c) "Manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping or otherwise handling of manganese or a compound of manganese or any mixture containing manganese ;

(d) “Efficient exhaust ventilation" means localized ventilation effected by mechanical means for the removal of dust or fume or mist at its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove the dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a work place.

2. Application

The Schedule shall apply to every factory in which or in any part of which any manganese process is carried on.

3. Isolation of a process

Every manganese process which may give rise to dust, vapour or mist containing manganese shall be carried on in a totally enclosed system or otherwise effectively isolated from other processes so that other plants and process and other parts of the factory and persons employed on other work or process may not be affected by the same.

4. Ventilation of process

No process, in which any dust, vapour or mist containing manganese is generated, shall be carried out except under a efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.

1. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include tests for detection of serum calcium, serum phosphate and manganese in blood and urine and also include steadiness tests and other neuromuscular co-ordination tests.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported

to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

6. Personal Protective Equipment

(1) The Occupier of the factory shall provide and maintain in good and clean condition suitable overalls and head coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.

(2) The Occupier of the factory shall provide suitable respiratory protective equipment for use by workers in emergency to prevent inhalation of dusts, fumes or mists sufficient number of complete sets of such equipment shall always be kept near the workplace and the same shall be properly maintained and kept always in a condition to be used readily.

(3) The Occupier shall provide and maintain for the use of all persons employed, suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance of personal protective equipment.

7. Food, drinks prohibited in the workrooms

No food, drink, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any work room in which any manganese process is carried on.

8. Mess-room

There shall be provided and maintained for the use of the persons employed in a manganese process a suitable mess-room which shall be furnished with sufficient tables and benches and adequate means for warming of food. The mess room shall be placed under the charge of a responsible person and shall be kept clean.

9. Washing facilities

There shall be provided and maintained in a clean state and in good condition, for the use of persons employed on manganese process a wash place under cover, with either

(1) a trough with a smooth impervious surface fitted with a waste pipe without plug. The trough shall be of sufficient length to allow at least 60 centimeters for every ten such persons employed at any one time, and having a constant supply of water from tap or jets above the trough at intervals of not more than 60 centimeters, or at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water; and

(2) sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.

10. Cloak-room

If the Chief Inspector-cum-Facilitator so requires there shall be provided and maintained for the use of persons employed in manganese process a cloak-room for the clothing put off during working hours with adequate arrangement for drying the clothing.

11. Cautionary placard instructions

Cautionary notices in the following form and printed in the language of the majority of the workers employed, shall be affixed in prominent places in the factory where they can be easily and conveniently read by the workers and arrangements shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and the best preventive measures and methods to protect themselves. The notices shall always be maintained in a legible condition.

CAUTIONARY NOTICE

Manganese and Manganese Compounds

(1) Dust fumes and mists of Manganese and Compounds are toxic when inhaled or when ingested.
(2) Do not consume food or drink near the work place.
(3) Take a good wash before taking meals.
(4) Keep the working area clean.
(5) Use the protective clothing and equipments provided.
(6) When required to work in situations where dusts, fumes, or mists are likely to be inhaled, use respiratory protective equipments provided for the purpose.
(7) If you get severe headaches, prolonged sleeplessness or abnormal sensations on the body, loose gait, speech interference and loss of virility, report to the Occupier who would make arrangements for your examination and treatment.

SCHEDULE- XXVII

OPERATIONS INVOLVING HIGH NOISE AND VIBRATION LEVELS

Part-A

High Noise Levels

1. Application:-

This Part of the schedule shall apply to all operations in any manufacturing process having high noise level.

2.Definitions.-

For the purpose of this schedule, -

(a) "Noise" means any unwanted sound;

(b) "High noise level" means any noise level measured on the A-weighted scale is 85 dB or above;

(c) "Decibel" means one-tenth of "Bel" which is the fundamental divisions of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of "Bels" denoting such a ratio being the logarithm to the base the of 10 of this ratio. The noise level (or the sound pressure level) 6 corresponds to a reference pressure of 20 x 10 Newton per square meter or 0.0002 dynes per square centimeter which is the threshold of hearing, that is, the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated form is dB;

(d) "Frequency" is the rate of pressure variations expressed in cycles per second or hertz;

(e) "dBA" refers to sound level in decibels as measured on a sound level meter operating on the A-weighting net work with slow meter response; and

(f) "A-weighting" means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurement, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

3. Protection against noise.-

(1)In every factory, suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

TABLE -1

PERMISSIBLE EXPOSURE IN CASES OF CONTINUOUS NOISE.

Total time of exposure (continuous or a number of short term exposures) pressure level in or a number	Sound of dBA per day, in hours.
(1)	(2)
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
¾	107
½	110
¼	115

Explanation:-

(1) No exposure in excess of 110 dBA is to be permitted.

(2) For any period of exposure falling in between any figure and the next higher or lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on a proportionate basis.

TABLE -2

PERMISSIBLE EXPOSURE LEVELS OF IMPULSIVE OR IMPACT NOISE.

Peak sound pressure level in dB	Permitted number of impulses or impact per day.
(1)	(2)
140	100
135	315
130	1000
125	3160
120	10000

Explanations.-

1. Exposure in excess of 140 dB peak sound pressure level is permitted.

2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

(2) For the purposes of this part of the schedule, if the variations in the noise level involve maximum at intervals of one second or less, the noise is to be considered as a continuous one and the criteria given in Table 1would apply. In other cases, the noise is to be considered as impulsive or impact noise and the criteria givenin Table 2 would apply.

(3) When the daily noise exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered, rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fractions.

C1 + C2+..... Cn

exceeds unit p-1

T1 T2 Tn

Where the C1, C2 etc. indicate the total time of actual exposure at a specified noise level and T1, T2, etc. denote thetime of exposure permissible at that level. Noise exposure of less than 90 dBA may be ignored in the above calculation.

(4) (a) Where it is not possible to reduce the noise exposure to the levels specified in the Tables in sub – paragraph 1 of paragraph 3 by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be provided with suitable ear protectors as per relevant National or International

Standards so as to reduce the exposure to noise to the levels specified in the Tables in sub - paragraph 1 of paragraph 3.

(b) The Occupier shall provide personal hearing protectors to the workers.-

(i) so as to eliminate the risk to hearing or to reduce the risk to as low a level as is reasonably practicable.

(ii) after consultation with the employees concerned or their representative.

(iii) ensure the hearing protectors is full and properly fitted, periodically checked for the effectiveness, used

(iv) and maintained in good working order and repair.

(v) ensure that workers are given periodical training in the use, care and maintenance of the Personal hearingprotectors.

(5) Where the ear protectors provided in accordance with sub-paragraph 3 of paragraph 4 and worn by a worker cannot Sill attenuate the noise reaching near his ear, as determined by subtracting the attenuation value in dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible under as the case may be, the noise exposure period shall be suitably reduced to correspond to the permissible noise exposures specified in the Tables in sub - paragraph 1 of paragraph 3.

(6) (a) In all cases where the prevailing sound levels exceed the permissible levels specified in the Tables in sub - paragraph 1 of paragraph 3 there shall be administered an effective hearing conservation program which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to places where noise levels arerelatively less or by any other suitable means.

(b) Every worker employed in areas where the noise exceeds the maximum permissible exposure levels specified in the Tables in sub - paragraph 1 of paragraph 3 shall be subjected to an auditory examination by a Medical officer within 14 days of his first employment and thereafter, shall be re-examined at least once in every 12 months. Such initial and periodical examinations shall include tests which the Medical officer may consider appropriate and shall include determination of auditory thresholds for pure tones of 125, 250, 500, 1000, 2000,4000and 8000 cycles per second.

Part-B

High Vibration Levels

1. Applications:-

This Part of the Schedule shall apply to all operations in a manufacturing part of the process havinghigh undesired vibrations.

2. Definition .-

(a) "daily exposure" means the quantity of mechanical vibration to which a

worker is exposed during a working day, which takes account of the magnitude and duration of the vibration;

(b) "Vibration" means a mechanical phenomenon where by oscillations occur about equilibrium point. The oscillations may be periodic or random;

(c) "high vibration" means any exposure greater than the exposure limit value and action value specified in paragraph - 3;

(d) "exposure action value" means the level of daily exposure set out in paragraph-3 for any worker which, if reached or exceeded, requires specified action to be taken to reduce risk;

(e) "exposure limit value" means the level of daily exposure for any worker which must not be exceeded, as specified in paragraph-3;

(f) "hand-arm vibration" means mechanical vibration which is transmitted into the hands are arms during a work activity as described in sub - paragraph-(1) of paragraph 3 ;

(g) "mechanical vibration" means vibration occurring in a piece of machinery or equipment or in a vehicle as a result of its operation; and

(h) "whole-body vibration" means mechanical vibration which is transmitted into the body, when seated or standing, through the supporting surface, during a work activity or as described in sub - paragraph-(2) of paragraph 3.

3. Exposure limit values and action values:-

(2) For hand-arm Vibration.-

(a) the daily exposure limit value is 5 m/s 2A(8);

(b) the daily exposure action value is 2.5 m/s2 A(8), and daily exposure shall be ascertained on the basis set out in the relevant National/International Standards specified in table 1 below.

(3) For whole body vibration.-

(a) the daily exposure limit value is1.15 m/s2 A(8);

(b) the daily exposure action value is 0.5 m/s2 A(8),and daily exposure shall be ascertained on the basis set out in the relevant National / International Standards.

TABLE -1

The Threshold Limit Values (TLVs) for exposure of the hand to vibration in X, Y or Z direction of axes in the threedimensional system shall be as given below:

Total Daily Exposure Duration (hours). Maximum value of frequency weightedacceleration (m/s2) in any direction.

4 to less than 8 hours 4

2 to less than 4 hours 6

1 to less than 2 hours 8

less than 1 hour 12

(4) Assessment of vibration exposure shall be made for each applicable direction (X, Y, Z) since vibration is a vector quantity (magnitude and direction). In each direction, the magnitude of the vibration during normal operation of the power tool, machine or work piece should be expressed by the root-mean-square (RMS) value of the frequency - weighted component acceleration, in units of meter per second squared (m/s2).

4. Assessment of risk to health due to vibration at the work Place:-

(1) An occupier who carries out work which is liable expose any worker from vibration to shall make a suitable and sufficient assessment of the risk created by that work to the health and safety of those and the risk assessment shall identify the control measures that need to be taken.

(2) The risk assessment should be reviewed whenever it is felt the changes in the process makes the earlier risk assessment no longer valid.

5. Engineering Control measures:-

(1) The occupier shall ensure that risk from the exposure of workers to vibration is either eliminated at source or, where this is not reasonably practicable, reduced to as low a level as is reasonably practicable.

(2) Where it is not reasonably practicable to eliminate risk at source pursuant to sub - paragraph 1 and an exposure action value is likely to be reached or exceeded, the employer shall reduce exposure to as low a level as is reasonably practicable by establishing and implementing a program of engineering control measures which are appropriate to this type of activity.

(3) The occupier shall ensure that the workers are provided with the following measures:-

(a) work equipment of appropriate ergonomic design which, taking account of the work to be done, produces the least possible vibration;

(b) the provision of auxiliary equipment which reduces the risk of injuries caused by vibration; and install appropriate maintenance programmes for work equipment, the workplace and workplace systems;

(4) Subject to above sub -paragraphs, the employer shall ensure that his employees are not exposed to vibration above an exposure limit value; and shall take necessary to identify the reasons for the limit being exceeded and take appropriate steps to reduce the exposure to vibration to below limit value.

Provided that where the exposure of an employees to vibration is usually below the exposure action value but varies markedly from time to time and may occasionally exceed the exposure limit value.

Provided further that any exposure to vibration averaged over one week is less than the exposure limit value and there is evidence to show that the risk from the actual pattern of exposure is less than the corresponding risk from constant exposure at the exposure limit value; and that the risk is reduced to as low a level as is reasonably practicable, taking into-account the special circumstances.

6. Medical Examination:-

(1) The occupier shall ensure that the workers who are likely to be exposed to vibration at above exposure action value are subjected to periodical medical examination once in a year. The medical examination shall include general and physical examination as well as special test for Reynaud's phenomenon.

(2) The health record of workers shall be maintained in Health Register in Form: HR by the occupier for a period of five years from the date of last test and produce to the Inspector-cum-Facilitator on demand.

(3) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(4) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(5) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(6) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register. .

7. Personal Protective equipment.-

(1) The occupier shall ensure that the workers who are likely to be exposed to high level of vibration are provided with appropriate Personal Protective Equipment (PPE) and protective clothing confirming to national or international standards. Such Personal Protective Equipment should include hand gloves arid safety shoes. The protective clothing shall be able to protect the workers from cold and dump.

(2) The Occupier shall ensure that workers are given periodical training in the use care and maintenance of the Personal Protective Equipment.

SCHEDULE -XXVIII

MANUFACTURE OF RAYON BY VISCOSE PROCESS

1. Definitions

For the purpose of this schedule

(i) "approved" means approved for the time being in writing by the Chief Inspector-cum-Facilitator ;

(ii) "breathing apparatus" means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted air ; or any other approved apparatus ;

(iii) "churn" means the vessel in which alkali cellulose pulp is treated with carbon disulphide;

(iv) "dumping" means transfer of cellulose xanthate from a dry churn to a dissolver ;

(v) "efficient exhaust draught" means a localized ventilation by mechanical means for the removal of any gas or vapour, so as to prevent it from escaping into the air or any place in which work is carried on. No draught shall be deemed to be efficient if it fails to control effectively any gas or vapour generated at the point where such gas or fume originates;

(vi) "fume process" means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off;

(vii) "life belt" means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man ;

(viii) "protective equipment" means apron, goggles, face shields, footwear, gloves and overalls made of suitable materials.

2. Ventilation

(1) In all workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of carbon-disulphide and hydrogen sulphide in the air of every work environment within the permissible limits.

(2) Notwithstanding the requirements in sub-paragraph (1), an efficient exhaust draught shall be provided and maintained to control the concentration of carbon-disulphide and hydrogen sulphide in the air at the following locations :

(a) dumping hoppers of dry churns;

(b) spinning machines;

(c) trio rollers and cutters used in staple fiber spinning ;

(d) hydro-extractors for yarn cakes;

(e) after treatment processes ; and

(f) spin baths.

(3) In so far as the spinning machines and trio rollers and cutters used in staple fiber spinning are concerned, they shall be, for the purpose of ensuring the effectiveness of the exhaust draught to be provided as required in sub-paragraph (1), enclosed as fully as practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of carbon-di-sulphide and hydrogen sulphide escaping to the work environment

(4) No dry churn shall be opened after completion of reaction without initially exhausting the residual vapors of carbon-di- sulphide by operation of a suitable and efficient arrangement for exhausting the vapors which shall be continued to be operated as long as the churn is kept opened.

(5) Whenever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (2), (3) and (4) is ineffective, fails, or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment or processes specified in the above said sub-paragraphs are in use, as soon as possible, and in any case not later than 15 minutes after such occurrence.

(6) (i) All ventilating systems provided for the purposes as required in sub-paragraphs (2), (3) and (4) shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations of test shall be rectified forthwith.

(ii) A register containing particulars of such examinations and tests, and the state of the systems and the repairs or alterations (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector-cum-Facilitator.

3. Waste from spinning machines

Waste yarn from the spinning machines shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed off as quickly as possible after decontamination.

4. Linking of dry churns

The inside surface of all dry churns shall be coated with a non-sticky paint so that cellulose xanthate will not stick to the surface of the churn, such coating shall be maintained in good condition.

5. Air monitoring

(1) To ensure the effectiveness of the control measures, monitoring of carbon-disulphide and hydrogen sulphide in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purposes.

(2) For the purpose of the requirement in sub-paragraph (1), instantaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analyzed by an approved method. The locations where such monitoring is to be done shall be as directed by the Inspector-cum-Facilitator.

(3) If the concentration of either carbon disulphide or hydrogen sulphide exceeds the

permissible limits for such vapour or gas as laid down in Rule 102A suitable steps shall be taken for controlling the concentrations in air of such containers. A report of such occurrences shall be sent to the Chief Inspector-cum-Facilitator forthwith.

6. Prohibition to remain in fume process room

No person during his intervals for meal, or rest shall remain in any room wherein fume process is carried on.

7. Protective equipment

(1) The occupier shall provide and maintain in good condition protective equipment as specified in the Table for use of persons employed in the processes referred to therein.

THE TABLE

Process	**Protective equipment**
(1)	(2)
1. Dumping	Overalls, face-shields, gloves and footwear - all made of suitable material
2. Spinning	Suitable aprons, gloves and footwear
3. Process involving or likely to involve contact with viscose solution	Suitable gloves and footwear
4. Handling of Sulphur	Suitable Chemical goggles
5. Any other process involving contact with hazardous chemicals	Protective equipment as may be directed by the Chief Inspector-cum-Facilitator by an order in writing

(2) A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

8. Breathing apparatus

(1) There shall be provided in every factory where fume process is carried on, sufficient supply of,

(a) breathing apparatus;

(b) oxygen and suitable appliances for its administration ; and

(c) life belts.

(2) (i) The breathing apparatus and other appliances referred to in sub-paragraph (1) shall be maintained in good condition and kept in appropriate locations so as to be readily available.

(ii) The breathing apparatus and other appliances referred to in clauses (a) and (b) of sub-paragraph (1) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.

(iii) A record of the maintenance and of the condition of the breathing apparatus and other appliances referred to in sub- clause (1) shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector-cum-Facilitator.

(3) Sufficient number of workers shall be trained and periodically re-trained in the use of breathing apparatus and administering artificial respiration so that at least two such trained persons would be available during all the working hours in each room in which (tune process is carried on.

(4) Breathing apparatus shall be kept properly labeled in clean, dry, light proof cabinets and if liable to be affected by fumes, shall be protected by placing them in suitable containers.

(5) No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.

(6) No breathing apparatus provided in pursuance of subparagraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

9. Electric fittings

All electric fittings in any room in which carbon-disulphide is produced, used or given off or is likely to be given off into the work environment, other than a spinning room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead sheathed.

10. Prohibition relating to smoking, etc

No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in a room in which fume process is carried on. A notice in the language understood by the majority of the workers shall be posted in prominent locations in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms.

Provided that fire, naked light or other means of producing a naked light or spark may be carried on in such room only when required for the purpose of the process itself under the direction of a responsible person.

11. Washing and bathing facilities

(1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 25 persons employed.

(2) The washing places shall have stand pipes placed at intervals of not less than one meter.

(3) Not less than one half of the total number of washing places shall be provided with

bathrooms.

(4) Sufficient supply of clean towels made of suitable material shall be provided:

Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector-cum-Facilitator.

(5) Sufficient supply of soap and nail brushes shall be provided.

12. Rest room

(1) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.

(2) Such rest room shall be provided with fresh air supply and adequate seating arrangement.

13. Cautionary notice and instructions

(1) The following cautionary notice shall be prominently displayed in each fume process room: -

CAUTIONARY NOTICE

1. Carbon disulphide (CS) and Hydrogen Sulphide (H2S) which may be present in this room are hazardous to health.
2. Follow safety instructions.
3. Use protective equipment and breathing apparatus as and when required.
4. Smoking is strictly prohibited in this area.

This notice shall be in a language understood by the majority of the workers and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

(2) Arrangements shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the preventive measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically.

(3) Simple and special instructions shall be framed to ensure that effective measures will be carried out in case of emergency involving escape of carbon disulphide and hydrogen sulphide. Those instructions shall be displayed in the concerned areas and workers shall be instructed and trained in the actions to be taken in such emergencies.

14. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to

do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include tests for estimation of exposure co-efficient (iodine azide test in urine) and cholesterol, as well as Electrocardiogram (ECG) and Central Nervous System (CNS) tests.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre employment.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE- XXIX

FLAMMABLE LIQUEFIED OR COMPRESSED GASES AND HIGHLY FLAMMABLE LIQUIDS

1. Application

Provisions of this Schedule shall apply to all factories where flammable liquefied or compressed gases or highly flammable liquids are manufactured, stored, handled used (sic.).

2. Definitions

For the purposes of this Schedule

(a) "bulk storage " means bullet or Horton sphere or mounded vessel or portable cylinders used for storage of flammable liquefied or compressed gases or highly flammable liquids, which are having cumulative water storage capacity exceeding one thousand liters;

(b) "bullet" means a horizontal cylindrical pressure vessel with hemispherical or dished ends used for storage of flammable liquefied or compressed gas;

(c) “explosive mixture” means a mixture of combustion agent (oxidizing substance in gaseous, liquid or solid state) and a fuel (oxidisable substance in gaseous, liquid or solid state) in such proportions that it could give rise to a very rapid and violent oxidation reaction, liberating more kinetic energy than is dissipated through conduction and convection, ultimately causing practical effect of explosion ;

(d) "fire proof " means a passive means of protection of a structure or equipment or vessel from exposure to direct fire or flame impingement or prolonged exposure to high intensity radiant thermal flux, by the application of a coating of certain heat-resistant substance or mixture of a specified rating ;

(e) "fire safe " means a provision of dual seating to control leakage to acceptable level, even after damage, due to fire, as applied to valves

(f) "flammable compressed gas " means flammable compressed gas as defined in rule 2 of the Static and Mobile Pressure Vessels (Unfired) Rules, 1981 framed under the Explosives Act, 1884 (Central Act IV of 1884) ;

(g) "flammable liquefied gas " means a flammable gas kept in liquefied state by the application of pressure at normal ambient temperature, 13% (thirteen percentage) or less of which by volume with air forms a flammable mixture or which has a flammable range with air of atleast 12% (twelve percentage) points regardless of the lower flammable limits;

(h) "gas free " means a condition when the concentration of a flammable gas in an equipment or a vessel is well below the threshold limits (lower explosive limit), so, that it is safe for a man to enter into the equipment or vessel or to conduct "hot work " there, as the case may be ;

(i) "highly flammable liquid " means any liquid including its solution, emulsion or suspension which when tested in a manner specified by sections 14 and 15 of the Petroleum Act, 1934 (Central Act XXX of 1934) gives off flammable vapors at a temperature less than 32 degrees Centigrade:

(j) "Horton sphere" means a spherical Pressure Vessel, supported vertically and is

used for the storage of flammable liquefied' or compressed gas;

(k) "hot work " means an activity which may produce enough heat or spark to ignite a flammable or explosive mixture;

(l) "Mounded vessel" means a pressure vessel for the storage of flammable liquefied or compressed as, which is placed above ground and is completely covered by a mound of earth or similar inert material except for nozzles, manhole covers, inspection covers fitted on the top of the vessel ;

(m) "purging" means an act of replacing the atmosphere inside a vessel or a container by an inert gas in such a manner as to prevent the formation of an explosive mixture.

(n) "purging into service" means the replacement of air in a closed system by an inert gas and then replacement of the inert gas by the flammable gas, vapour or liquid;

(o) "purging out of service" means the replacement of normal flammable content of a closed system by an inert gas and then replacement of the inert gas by air to such an extent that it is gas free and safe for any person to work ;

(p) "remote operated emergency valve" means a shut-off valve capable of remote operation which closes automatically on loss of the actuating power or fire engulfment and which is fire-safe.

3. Storage

Every highly flammable liquid, flammable liquefied or compressed gas used in every factory shall be stored in bulk in suitable fixed storage tank made of adequate fire-resistant construction and located in a safe position under the ground or in the open.

4. Location and spacing

Before selecting the location of any storage vessel, risk analysis study shall be carried out. Based on the risk analysis study, every storage vessel shall be located in the manner specified below:

(a) the location shall not interfere with the movement of vehicles. The Risk Contour shall not intercept the public places such as assembly points, canteen, rest sheds and similar other locations;

(b) before locating any storage vessel, the soil- condition shall be assessed for the suitability of the superstructure ;

(c) the storage vessel shall be sited above ground in open air and well-ventilated place ;

(d) mounded vessels shall be so located that the manholes and pressure relief valves are in a well-ventilated position;

(e) the minimum safety distance between the storage vessels and from buildings, boundary or fixed ignition source shall be in accordance with the Static and Mobile Pressure Vessels (Unfired) Rules, 1981, as amended from time to time ;

(f) the storage vessels shall not be installed one above the other ;

(g) the bullets shall be so located that their longitudinal axes do not points towards other vessels, vital process equipment, control rooms, loading stations, nearby buildings or

storage tanks containing hazardous materials;

(h) weeds, long grass, deciduous shrubs and trees and any combustible materials shall be removed from the storage vessel area within the licensed premises;

(i) the storage vessels shall not be located within the blinded enclosure of any heat source or other flammable liquids, gases or oxidizers ;

(j) the storage vessels, pumping equipment, loading and unloading facilities and vaporizers shall be located in an exclusive fenced compound of atleast 2 meters high along the perimeter of the safety zone'; such fenced compound shall have atleast two gates for the safe exit of persons and vehicles in case, of any emergency ;

(k) the number of storage vessels in one group shall not exceed six ;

(l) storage vessels within a group shall be so located that their longitudinal axes are parallel to each other;

(m) spheres and bullets shall not be grouped together and shall be provided with separate piping manifold, so as to avoid overfilling of a vessel due to gravitation from the other;

(n) the top surface of the storage vessels installed in a group shall be on the same plane so that the pressure safety valve blow-out from them do not affect the other;

(o) the flooring of the bullets or spheres shall be sloped in such a way that the spilled liquid or gas from any vessel shall not pass through any other vessel;

(p) the storage vessels shall not be located in such a way that the high tension electrical cables shall not pass through or near the licensed premises;

(q) storage vessels shall not be located in places which are susceptible to flooding;

(r) the grade for the storage vessels shall be elevated slightly above the surrounding terrain in order to ensure complete drainage of water from beneath the bottom of the vessels; and

(s) every container, vessel or tank used for storing highly flammable liquid or flammable liquefied or compressed gas shall be clearly and in bold letters marked Danger — Highly Flammable Liquid " or - Danger — Flammable liquefied or Compressed Gas ", as the case may be.

5. Design of storage vessels

(1) **General**: Each static vessel for the storage of flammable liquefied or compressed gas shall be provided with the following finings and instruments which are suitable for use at pressures not less than the design pressure of the vessel and for the temperatures appropriate to the worst operating conditions namely:

(a) at least two pressure safety valves connected independently to the vapour space;

(b) two independent liquid level indicators;

(c) a high level switch with alarm;

(d) a pressure gauge, connected to the vapour space; and

(e) a temperature gauge for measuring the temperature of the contents of the

vessel.

(2) Vessel connections**:** In every flammable liquefied or compressed gas storage vessel

(i) all the connections to the vessel shall be designed and fitted in accordance with the Design Code of Indian Standard-2825 or equivalent duly approved by the Chief Controller of Explosives;

(ii) not more than one nozzle shall be provided at its bottom for inlet and outlet purpose, apart from the drainage pipe

(iii) the nozzle shall be a full-welded pipe and shall extend to a minimum distance of 3 (three) meters from the shadow of the vessel. A combination of manual and remote operated shut-down valve shall be provided on this bottom nozzle at a distance of atleast 3 (three) meter beyond the shadow of the vessel. The nozzle shall have a slope of 1.5 degree ;

(iv) the nozzle shall be stress-relieved along with the vessel ;

(v) (sic) there shall not be any flange, instrument tapping or manhole fitted on this nozzle up to the combination of manual and remote operated valve ; and

(vi) an excess flow valve shall be provided for the nozzle on the body of the vessel.

(3) Pressure Safety Valve: In every storage vessel

(i) the pressure safety valves provided shall be of spring-loaded type (weight-loaded safety valves shall not be used). Each of the pressure safety valves shall have 100% (hundred percent.) relieving capacity;

(ii) the pressure safety valves shall be set to discharge at a pressure not more than 110 (one hundred and ten) per cent. of the design pressure of the vessel and shall have a total relieving capacity adequate for limiting the pressure build-up in the vessel not more than 120 (one hundred and twenty) per cent. of the design pressure;

(iii) the discharge of the pressure safety valves shall be connected to flare system. if available. In case the flare system is not available, the discharge from the pressure safety valve shall be vented vertically upwards to atmosphere at a minimum elevation of 3 meter above the top of the vessel for effective dispersion of the discharge. A loose-fitting rain cap with a non-sparking chain attached to the vent pipe shall be fitted on top of the pressure safety valve;

(iv) an isolation valve shall be provided in between each pressure safety valve and the vessel. The arrangement of such isolation valve shall be so designed as to afford full required capacity flow through atleast one of the pressure safety valves ; and

(v) each pressure safety valve shall be visibly marked with the "set pressure" in Kg/Sq.Cm. (gauge) at which it will discharge, with its actual rate of discharge in cubic meter per minute of the gas at a pressure of 120 (one hundred and twenty) per cent. of the design pressure of the vessel.

(4) Emergency shut-off valve: In every storage vessel

(i) all liquid and vapour connections, except those for pressure safety valves and the drainage connections of diameter less than 25 (twenty five) mm., shall

have an emergency shut-off valve, such as an excess flow check valve or a remote operated valve:

Provided that the emergency shut-off valve is not required in cases where the connection to a vessel is not greater than three centimeter in diameter for liquid and eight centimeter in diameter for vapour ;

(ii) where the emergency shut-off valve provided is of 'excess flow check valve' type, its closing rate of flow shall be below the rate which is likely to result due to a fracture of the line which it is protecting, calculated under the worst conditions. Excess flow check valve shall have a flow capacity sufficiently above the normal flow requirements to prevent valve chatter.

(5) Bottom water draw-off or drain valve- In every storage vessel

(i) there shall be provided two drain valves at the bottom of the vessel between the remote operated valve and the first isolation valve. The length of the pipeline between the two drain valves shall be atleast 0.5 meter to minimize the risk of simultaneous obstruction of both valves due to freezing of any water present in the liquefied gas. The drain connections shall be not more than 50 (fifty) millimeter in diameter;

(ii) the first drain valve from the vessel shall be of gate type (throttle type), while the second drain valve shall be of quick shut-off type ;

(iii) the material of construction for the drain pipeline and the related connections shall be suitable for cryogenic application.

(6) Sampling valve: In every storage vessel, two valves with suitable distance-pipe of not less than 0.5 meter in length between them shall be fitted at its bottom between the remote operated valve and the first isolation valve for sampling purpose. (The provision of a distance-pipe is for the purpose of avoiding icing problem in the upstream valve)

(7) Liquid level gauging device: In every storage vessel, out of two level indicators provided, one shall be of "float" type and the other shall be of "differential pressure" type in case of Horton Spheres. Magnetic float type gauge shall be used for bullets in the place of "differential pressure" type "High Level" alarm shall be set on the level indicators to operate at not more than 85% (eighty five percent.) of the volumetric capacity of the vessel. An audio-visual indication as regards the high level alarm shall be provided at the normal place of operator's seat.

(8) Pressure gauge: In every storage vessel, there shall be provided atleast one pressure gauge, duly calibrated and having a dial range not less than 1.5 times the design pressure, easily visible and designed to show the correct internal pressure at all times. It shall be provided in the vapour space at the top. A suitable stop valve shall be provided in between the vessel and the pressure gauge.

(9) Gas sensors: In every storage vessel for flammable liquefied or compressed gas, gas sensors with alarm shall be provided at vulnerable areas and in the event of gas leakage, such sensor shall trip the compressor or pump if in operation.

(10) Bonding: Electrical continuity shall be maintained between the flanges by means of bonding in every storage vessel and its pipe lines.

(11) Pop off valves: **“**Pop off" valves shall be provided in between isolation valves on the pipelines carrying flammable liquefied or compressed gases.

(12) Capacity of vaporizer: The vaporizer, connected to the flammable liquefied gas storage vessels shall have adequate capacity to meet the required flow rate of flammable liquefied gas in the process.

6. Prevention of ignition

In every location where highly flammable liquid or flammable liquefied or compressed gas is stored, conveyed, handled or used or where there is danger of fire or explosion from accumulation of highly flammable liquid or liquefied compressed gas in air, all practicable measures shall be taken to exclude the sources of ignition. Such precautions shall include the following:

(a) all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

(c) no person shall wear or be allowed to wear any footwear having iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

(d) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;

(e) transmission bolts with iron fasteners shall not be used ; and

(f) all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, over heated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

7. Enclosed system for conveying highly flammable liquids:

Wherever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed system consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed system shall be so designed, installed, operated and maintained as to avoid leakage or the risk of spilling.

8. Prohibition of smoking:

No person shall smoke in any place where a highly flammable liquid or flammable liquefied or compressed gas is present in circumstances that smoking would give rise to a risk of fire. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notices indicating prohibition of smoking at every place where this requirement applies.

9. Fire protection:

In every factory

(1) no vehicular traffic shall be permitted within the risk area of lower flammable limit of the highly flammable liquid or flammable liquefied or compressed gas stored. When required, vehicles filled with approved spark arrestors shall only be allowed with valid vehicle entry permit.

(2) all the vessels used for bulk storage or handling of highly flammable liquid or flammable liquefied or compressed gases shall be protected against the hazards of fire as follows:

(a) medium velocity water spray system shall be provided for all above ground storage vessels, cylinder storage or filling or repair sheds, pump houses, bulk lorry and tank wagon gantries;

(b) detection of fire for automatic actuation of medium velocity water sprinkler system shall be provided at all critical locations. such as bulk storage, tank truck or tank wagon gantry, pump or compressor house and vapourisers ;

(c) medium velocity water sprinkler system shall be based on heat and other detection.

(d) Quartzoid Bulb protection designed to blow at 79 (seventy nine) degree centrigrade (maximum) shall be provided in open areas or in the sheds ;

(e) medium velocity water sprinkler system shall function in such a way that the actuation of fire detectors shall initiate the following:

(i) opening of deluge valve ;

(ii) audio-visual alarm at the fire pump house or control panel ;

(iii) fire siren ; and

(iv) the diesel pump will get started based on the "Set pressure" to supplement or to maintain the fire water pressure in the ring main ; and

(f) The medium velocity water sprinkler system shall have a minimum spray density of ten liters per minute per square meter in the case of flammable liquefied or compressed gas and in the case of highly flammable liquid it shall have minimum spray density of 3 (three) liters per minute per square meter for the single largest risk area.

For the purpose of calculation of a single risk area, the following shall be taken into account:

(i) in case of bulk storage, adjoining vessels within the distance of R + 30 (thirty) meter, where R is the radius of the vessel and 30 (thirty) meter shall be measured from the periphery of the vessel

(ii) in case of tank lorry gantry, a maximum of 8 (eight) bays shall be taken as a single risk area ; and

(iii) in case of tank wagon gantry, a minimum of one gantry (600 (six hundred) Metric Tonnes) shall be taken as a single risk area

(3)

(a) a fire water ring main shall be provided all around the locations of storage and handling of flammable liquefied or compressed gases with hydrants or monitors spaced at 30 (thirty) meter centre to centre. Fire hydrants and

monitors shall be installed outside the licensed premises;

(b) the fire water pressure system shall be designed for a Minimum residual pressure of 7 (seven) Kgf/Sq. Cm. (gauge) at the remotest place of application in the plant ;

(c) fire hydrant network shall be provided in closed loops to ensure multi-directional flow in the system. Isolation valves shall be provided to enable isolation of any section of the network without affecting the flow in the rest; and

(d) the fire water system in the plant shall be designed to meet the highest fire-water flow requirement of medium velocity water sprinkler for a single largest risk area at a time plus 288 (two hundred and eighty eight) meter/hour for operating 2 (two) numbers fire water monitor or supplementary hose requirements. (

(4)

(a) water for the hydrant service shall be stored in any easily accessible surface of underground concrete reservoir or above ground tank of steel or concrete;

(b) the effective fire water storage capacity available for fire-fighting shall be for four hours ; and

(c) storage tank or reservoir for fire water shall be in two interconnected compartments to facilitate cleaning and repair.

(5) Portable fire extinguishers as approved by Bureau of Indian Standards shall be located at convenient places as indicated in the Table below : —

THE TABLE

AREA	PORTABLE FIRE EXTINGUISHER
(1)	**(2)**
1. Flammable liquefied gas or storage vessels (each)	2 Numbers 10 Kg. DCP
2. Tank wagon loading or unloading gantries	1 Number 10 Kg. DCP. extinguisher for every 15/20 meters of gantry
3. Tank truck loading or unloading gantries	1 Number 10 Kg. DCP, fire extinguisher in each Bay and t Number 50 Kg. Mobile DCP unit/gantry

The dry chemical powder used in the extinguishers shall be potassium or Urea based or Sodium Bicarbonate as per IS: 4308. The expellant gas ie., N2/CO2 should be of good quality.

10. Loading and unloading facilities for flammable liquefied or compressed gas

(1) Loading: In every factory, where the loading of flammable liquefied or compressed gas is carried on, the loading station shall consist of the following:

(a) a filling line with an isolation valve and check valve ;

(b) a vapour return line with a check valve and an isolation valve to be connected back to the storage vessel from which the loading pump is drawing flammable liquefied gas ;

(c) suitable loading arm or flexible hoses shall be provided at the end of filling line and vapour return line for connecting to the tank truck vessels or tank wagons ; and

(d) suitable thermal pressure relief valve(s) shall be provided between the shut-off valves to protect against excessive pressure which may develop due to thermal expansion of the trapped liquid .

(2) Unloading: In every factory, where unloading of flammable liquefied or compressed gas is carried on, the compressor used for unloading of flammable liquefied gases by means of a differential pressure between the receiving and discharging vessels by withdrawing vapour from the receiving vessel and forcing it at high pressure into the discharging vessel shall have the following facilities:

(a) liquid unloading check valve line with isolation valve; and

(b) vapour line with isolation valves ;

(3)Loading and unloading operations: In every factory, where the loading or unloading of flammable liquefied or compressed gas is carried on

(a) written operating procedures for loading or unloading operation, clearly defining the safety checks and precautions to be observed as well as the responsibilities of the personnel involved in such operation, shall be prepared both in English and in Telugu and shall be given to them and also displayed at the site;

(b) flexible hoses used for transfer of flammable liquefied or compressed gas to or from a tank truck or tank wagon shall be,

(i) designed and constructed in accordance with the Static and Mobile Pressure Vessels (Unfired) Rules, 1981;

(ii) having a means of identification ; and

(iii) periodically checked for electrical and mechanical continuity and recorded in the register;

(c) for connecting and disconnecting hoses, only non-sparking type of tools shall be used;

(d) the tank truck shall have the starter motor which shall be of non-sparking or flame-proof type;

(e) the tank truck shall be positioned on a leveled ground and blocks (checks) shall be placed at front and rear wheels in order to prevent the risk of accidental vehicle movement;

(f) the engine of the vehicle shall be stopped and all the electrical equipment shall be switched off, before commencing the loading or unloading operation;

(g) before commencing the loading or unloading operation, static charge shall be effectively discharged by bonding and earthing of the storage vessels and the

road tankers or wagons;

(h) the road tanker or wagon shall be electrically bonded at, specified point to the fixed grounding system;

(i) an authorised person shall supervise the transfer operation and respond immediately in the event of an emergency;

(j) during loading operation, the pressure within the receiving tank truck vessel shall be observed to ensure that it does not approach the " start-to-discharge " pressure of the relief valve. Filling rate shall be regulated as required;

(k) the receiving vessel which is having an internal pressure of less than 1(one) Kg/Sq.Cm (g) shall not be permitted to be filled, such vessel shall be checked for Oxygen content or explosive mixture and purged, if necessary ;

(l) filling or transfer operation shall be done only during day time ;

(m) filling or transfer operation shall be stopped immediately in the event of—

(a) uncontrolled leakage occurring;

(b) a fire occurring in the vicinity;

(c) lightning and thunder-storm;

(n) the "Safe Operating Procedure " for unloading shall be displayed conspicuously in English and Telugu near the unloading area.

11. Maintenance and Inspection

In every factory where highly flammable liquid or flammable liquefied or compressed gas is stored in bulk.

(1) the storage vessels and the safety fittings and instruments shall be tested periodically as per the requirements under various statutes as applicable and relevant records with the particulars of such testing shall be maintained ;

(2) loading or unloading hoses shall be tested atleast once in every six months ;

(3) the earth pits shall be maintained well and the earth resistance shall be measured atleast once in every 12 (twelve) months ; and records shall be maintained in this regard ;

(4) the foundation and supports of the storage vessels shall be checked once in a year for differential settlement due to disturbance in the sub-soil ;

(5) the cathodic protection, if provided, shall be monitored periodically and maintained well for its effectiveness ;

(6) the gas detection system shall be checked and calibrated periodically ; and

(7) the fire water system which includes fire water pumps, fire hydrant or monitor, piping network and water sprinkler or deluge system shall be checked periodically and maintained well for its fail-safe operation.

12. Training

The occupier of every factory in which highly flammable liquid or flammable liquefied or compressed gas is stored in bulk shall ensure that

(1) the supervisory or managerial personnel are adequately trained in all aspects of safe storage and handling of highly flammable liquid or flammable liquefied or compressed gas as well as disaster control or preparedness and response

(2) regular raining programmes are conducted in loading or unloading operation, drafting procedure, commissioning and decommissioning procedures," hot work" permit system, fire-fighting or emergency combat operation, health hazards etc., for

(a) regular workers;

(b) contract workers; and

(c) security staff.

(3) Full-scale emergency mock drill, simulating leakage of flammable gas and the consequent major fire, are conducted in the plant atleast once in every six months in order to assess the level of preparedness and the adequacy of combat measures. Any deviations or defects observed during such mock-drill shall be rectified forthwith

SCHEDULE- XXX

OPERATIONS IN FOUNDARIES AND FURNACES

1. Application

Provisions of this schedule shall apply to all parts of factories where any of the following operations or process are carried on:

(a) The production of iron casting or, as the case may be, steel castings by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding or by centrifugal casting and any process incidental to such production;

(b) the production of non-ferrous castings by casting metal in moulds made of sand, loam, metal, moulding composition or other material or mixture or materials, or by shell mouldings, die-casting (including pressure die-casting), centrifugal casting or continuous casting and any process incidental to such production ;

(c) the melting and casting of non-ferrous metal land/or ferrous metal) for the production of ingots, billets, slabs or other similar products and the stripping thereof ; but shall not apply with respect to

(i) any process with respect to the smelting and manufacture of lead and the Electric Accumulators ;

(ii) any process for the purposes of printing works ; or

(iii) any smelting process in which metal is obtained by a reducing operation or any process incidental to such operation ; or

(iv) any process in the course of the manufacture of solder or any process incidental to such manufacture; or

(v) the melting and casting of lead or any lead-based alloy for the production of ingots, billets, slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

2. Definition

For the purpose of this Schedule

(i) "approved respirator" means a respirator of a type approved by the Chief Inspector-cum-Facilitator ;

(ii) " Cupola or furnace" includes a receiver associated there with;

(iii) "dressing or fettling operations "includes stripping and other removal of adherent sand, corers, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include

(i) the removal of metal from a casting when performed incidentally in connection with the machining or assembling of castings after they have been dressed or fettled, or

(ii) any operation which is a knockout operation within the meaning of this Schedule ;

(iv) "foundry" means those parts of a factory in which the production of iron or steel or non-ferrous castings (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by steel moulding or by centrifugal casting in metal moulds lined with sand, or die casting including pressure die castings, together with any part of the factory in which any of the following processes arc carried on as incidental processes in connection with and in the course of, such production, namely, the preparation and mixing of materials used in foundry process, the preparation of moulds and cores, knock-out operations and dressing or fettling operations ;

(v) "knock-out operations" means all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring out and the removal of runners and risers ;

(vi) "pouring aisle" means an aisle leading from a main gangway or directly from a cupola or furnace to where metal is poured into moulds.

(vii) "qualified supervisors" means a person possessing a Bachelor's Degree in Science or Diploma or Degree in Engineering with Certificate in ferrous/non-ferrous technology from any institution recognised by the Chief Inspector-cum-Facilitator.

3. Prohibition of use of certain materials as parting materials

(1) A material shall not be used as a parting material if it is a material containing compounds of silica calculated as silica to the extent more than five per cent, by weight of the dry material:

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silica:

(i) Zirconium silicate (zircon).

(ii) Calcined china clay.

(iii) Calcined aluminious fireclay.

(iv) Sillimanite.

(v) Calcined or fused alumina.

(vi) Olivine.

(vii)Natural sand.

(2) Dust or other matter deposited from a fettling or blasting process shall not be used as a parting material or as a constituent in a parting material.

4. Arrangement and storage

For the purposes of promoting safety and cleanliness in workrooms, the following requirements shall be observed:

(a) moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy articles shall be so arranged and placed as to enable work to be carried on without unnecessary risk ;

(b) suitable and conveniently accessible racks, bins or other receptacles shall be provided and used for the storage of other gear and tools;

(c) where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins, bunkers or other receptacles shall be provided for the purpose of such storage.

5. Construction, Installation and Operation

(1) The precinct in which induction furnace is installed shall be of adequate strength and shall be segregated from the other parts of the factory in such a way so that minimum number of workers is exposed to the risk of any fire or explosion at any time;

(2) Furnace shed shall be well ventilated

(3) All the fitting and attachment of Induction furnace shall be of good construction, sound material and adequate strength;

(4) Adequate arrangements shall be made to avoid tilting of the ladles while transportation

(5) Ladle shall not be filled with molten metal more than 3/4th of its volume to avoid spillage of molten metal while being carried by the crane;

(6) The refractory material of the induction furnace shall be strong at high temperature, resistant to thermal shock, chemically inert, low thermal conductivity and co-efficient of expansion and of adequate uniform thickness.

(7) The lining of the induction furnace shall be checked by qualified supervisor every week for any wear and tear and damage as per relevant Bureau of Indian Standards.

(8) Adequate precautions shall be taken during repair of induction furnace as per relevant bureau of Indian Standards.

6. Construction of floors

(1) Floors or indoor workplaces in which the processes are carried on, other than parts which are of sand, shall have an even surface of hard material.

(2) No part of the floor of any such indoor workplace shall be of sand except, where this is necessary by reason of the work done.

(3) All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as practicable, be maintained in an even and firm condition.

7. Means of escape

There shall be atleast two ways of escape with adequate width at opposite ends of the furnace platforms.

8. Display of Notice

Notice regarding non-use of water, etc. near induction furnace shall be displayed

9. Charging of scrap in Induction Furnace

(1) No scrap material with close cavities shall be charged in the induction furnace. Scrap to be charged shall be dry and shall not contain oil or any other liquid or moisture.

(2) No scrap material shall be fed into induction furnace unless it is thoroughly checked in the presence of qualified Supervisor.

(3) Sealed container or part made by centrifugal casting shall not be fed into the furnace unless it is cut into pieces.

(4) No worker shall be engaged in charging of scrap material in induction furnace unless practical measures such as substantial safeguards against splash of hot metal, splatter etc., are provided.

(5) Scrap received in the form of pressed bundle should be opened, sorted and only then fed into furnace.

10. Cleanliness of Indoor workplaces

(1) All accessible parts of the walls of every indoor workplace in which the processes are carried on and of everything affixed to those wall shall be effectively cleaned by a suitable method to a height of not less than 4.2 meters from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this paragraph including the date (which shall be not less than five months nor more than nine months after the last immediately preceding washing, cleaning or other treatment).

(2) Effective cleaning by a suitable method shall be carried out atleast once every working day of all accessible parts of the floor of every indoor workplace in which the processes arc carried on, other than pans which are of sand; and the parts which are of sand shall be kept in good order.

11. Manual operations Involving molten metal

(1) There shall be provided and properly maintained for all persons employed on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation

(a) which is adequate for the safe performance of the work and

(b) which, so far as reasonably practicable, is kept free from obstruction.

(2) Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which were any person walks while engaged in the operation shall be on the same level :

Provided that, where necessary to enable the operation to be per-formed without undue risk, nothing in this paragraph shall prevent the occasional or

exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor for any person while engaged in the operation.

12. Gangways and pouring aisles

(1) In every workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this schedule and, so far as reasonably practicable, in every other workroom to which this paragraph applies, sufficient and dearly defined main gangways shall be provided and properly maintained which

(a) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage ;

(b) shall be kept, so far as reasonably practicable, free from obstruction ;

(c) if not used for carrying molten metal, shall be atleast 920 millimeters in width ;

(d) if used for carrying molten metal shall be

(i) Where truck ladles are used exclusively, atleast 600 millimeters wider than the overall width of the ladle;

(ii) Where hand shanks are carried by not more than two men, atleast 920 millimeters in width ;

(iii) Where hand shanks are carried by more than two men, atleast 1.2 meters in width ; and

(iv) Where used for simultaneous travel in both directions by men carrying hand shanks, atleast 1.8 meters in width.

(2) In workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this Schedule, sufficient and clearly defined pouring aisles shall be provided and properly maintained which

(a) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

(b) shall be kept so far as reasonably practicable free from obstruction ;

(c) if molten metal is carried in hand ladles or bull ladles by not more than two men per ladle, shall be atleast 460 millimeters wide, but where any moulds alongside the aisle arc more than 510 millimeters above the floor of the aisle, the aisle shall be not less than 600 millimeters wide;

(d) if molten metal is carried in hand ladles or bull ladles by more than two men per ladle, shall be atleast 760 millimeters wide ;

(e) if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the work.

(3) Requirements of sub-paragraphs (1) and (2) shall not apply to any workroom or part of a workroom if, by reason of the nature of the work done therein, the floor of that workroom or, as the case may be, that part of a workroom has to be of sand.

(4) In this paragraph "workroom to which this paragraph applies" means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and a workroom to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the making of this schedule if the construction, reconstruction or conversion thereof was begun after the making of this Schedule.

13. Work near cupolas and furnaces

No person shall carry out any work within a distance of four meters from a vertical line passing through the delivery and of any spout of a cupola or furnace, being a spout used for delivering molten metal, or within a distance of 2.4 meters from a vertical line passing through the nearest part of any ladle which is in position at the end of such a spout, except in either case where it is necessary for the proper use or maintenance of a cupola or furnace that work should be carried out within that distance of that work is being carried out at such a time and under such conditions that there is no danger to the person carrying it out from molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.

14. Dust and fumes

(1) Open coal, coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom.

(2) No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fires is un-avoidable.

(3) Mould stoves, core stoves and annealing furnaces shall be so designed, constructed, maintained and worked as to prevent, so far as practicable, offensive or injurious fumes from entering into any workroom during any period when a person is employed therein

(4) All knock-out operations shall be carried out

(a) In a separate part of the foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation and a high standard of general ventilation are provided ; or

(b) In an area of the foundry in which, so far as reasonably practicable, effective and suitable local exhaust ventilation is provided, or where compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided.

(5) All dressing or fettling operations shall be carried out

(a) in a separate room or in a separate part of the foundry suitably partitioned off ; or

(b) in an area of the foundry set apart for the purpose ; and shall, so far as reasonably practicable, be carried out with effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating as near as possible to the point of origin of the dust.

15. Maintenance and examination of exhaust plant

(1) All ventilating plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

(2) All ventilation plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by a responsible person. This shall be thoroughly examined and tested by a competent person atleast once in every period of twelve months; and particulars of the results of every such examination and test shall be entered in a register in Form XXVI, which shall be kept readily available for inspection by an Inspector-cum-Facilitator. Any defect found on any such examination and test shall be immediately reported in writing by the person carrying out the examination and test to the Occupier of the Factory.

16. Protective equipment

(1) The occupier shall provide and maintain suitable protective equipment specified for the protection of workers,

(a) suitable gloves or other protection for the hands for workers engaged in handling any hot material likely to cause damage to the hands by burn, scald or scar, or in handling pig iron, rough castings or other articles likely to cause damage to the hands by cut or abrasion;

(b) approved respirators for workers carrying out any operations creating a heavy dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.

(2) No respirator provided for the purposes of sub-paragraph (1) (b) has been worn by a person shall be worn by another person if it has not since been thoroughly cleaned and disinfected.

(3) Persons who for any of their time

(a) work at a spout of or attend to, a cupola or furnace in such circumstances that material there from may come into contact with the body, being material at such a temperature that its contact with the body would cause a burn ; or

(b) are engaged in, or in assisting with, the pouring of molten metal ; or

(c) carry by hand or move by manual power any ladle or mould containing molten metal ; or

(d) are engaged in knocking-out operations involving material at such a temperature that its contact with the body would cause a burn; shall be provided with suitable footwear and gaiters which worn by them prevent, so far as reasonably practicable, risk of burns to his feet and ankles.

(4) Where appropriate, suitable screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).

(5) The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.

(6) Every person shall make full and proper use of the equipment provided for his protection in pursuance of sub-paragraphs (1) and (4) and shall without delay report to the Occupier, or other appropriate person any defect in, or loss of, the same.

(7) Workers working in the furnace/casting pit area shall be provided with cotton clothes. Safety shoes, leg guards, apron, face shield, hand gloves and safety helmet.

(8) Workers employed for segregation of scrap shall be provided with safety shoes and hand gloves.

(9) Five retardant and heat retardant clothing shall be provided to all the workers working on platform of induction furnace

17. Training and Supervision

(1) All operations under this Schedule shall be carried out under the supervision of qualified supervisors at all times.

(2) Workers carrying out operations and maintenance activities in foundries and furnaces shall be adequately trained

18. Washing and bathing facilities

(1) There shall be provided and maintained in clean state and good repair for the use of all workers employed in the foundry,

(a) a wash place under cover with either

(I) a trough with impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least sixty centimeters for every 10 such persons employed at any one time and having a constant supply of dean water from taps or jets above the trough at intervals of not more than sixty centimeters ; or

(II) atleast one tap or stand pipe for every ten such persons employed at any one time, and having a constant supply of dean water, the tap or stand pipe being spaced not less than 1.2 meters apart ; and

(b) not less than one-half of the total number of washing places provided under clause (a) shall be in the form of bathrooms ;

(c) a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.

(2) The facilities provided for the purposes of sub-paragraph (1) shall be placed in-charge of a responsible person or persons and maintained in a clean and orderly condition.

19. Disposal of dross and skimming

Dross and skimming's removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.

20. Disposal of waste

Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste burnt sand) as soon as reasonably practicable after the castings have been knocked-out.

21. Material and equipment left out of doors

All material and equipment left out of doors (including material and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid unnecessary risk. There shall be safe means of access to all such material and

equipment and, so far reasonably practicable, such access shall be by roadways or pathways or which shall be properly maintained. Such roadways or pathways shall have a firm and even surface and shall, so far as reasonably practicable be kept free from obstruction.

22. Medical facilities and records of examinations and tests

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre employment medical examination shall include pulmonary function test, and chest X ray.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre-employment except the chest X-ray which shall be carried out at least once in three years.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CFgranted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker

affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE - XXXI

FIRE WORKS MANUFACTORIES AND MATCH FACTORIES

1. Application

The provisions of this Schedule shall apply to all manufactories and processes incidental thereto carried on in any Fire Works Manufactory or a match works and shall be in addition to and not in derogation of any provisions contained in other rules.

2. Definition

(a) "Fire Works Manufactory" means any factory or such parts of any factory wherein the following chemicals or combination of chemicals and materials are being used for the manufacture or crackers, sparklers, caps, fuses, blasting powder and fireworks

Saltpetre;	Pyrotechnic aluminium Powder;
Barium Nitrate;	Charcoal;
Potassium chloride;	Red Phosphorus;
Gum;	Dextrine;
Strontium Nitrate;	Magnesium Powder;
Copper Coated Wires;	Steel filings or iron filings;
G.I. Wire;	Gun Powder (Black Powder);

(b) "Match works" means any establishment which manufactures safety matches or colour matches by the use of chemicals mentioned in clause (a).

(c) "Breathing apparatus" means a device covering mouth or nose with necessary connections by means of which a person using it in a poisonous asphyxiating or irritant atmosphere breathes ordinary air or any other suitable apparatus approved in writing by the Chief Inspector-cum-Facilitator in this behalf.

3. Buildings

a. The building of any fireworks manufactory or match factory shall conform to the

standards prescribed under the Indian Explosives Act 1884 (Central Act IV of 1884), and the height of such buildings shall at no time be less than 3 meters;

b. No building inside a fireworks manufactory shall have a first floor at any time:

c. In Match works, provided with a first floor, there shall be 2 staircases leading from the first floor to the ground floor irrespective of the number of persons employed in the first floor and one of the staircases shall be of masonry construction or of non-inflammable materials;

d. All doors shall open outwards and all the doorways shall be kept free from obstructions;

e. All doors of workrooms shall not be less than 1.2 meters in width or less than 2 meters in height;

f. The floors of all work rooms including mixing sheds shall be completely covered by a rubber sheet having a smooth surface and having a thickness of atleast 3 mm. If the floor cannot be covered by a single rubber sheet, more than one rubber sheet may be used, so that each sheet is overlapped by the other atleast 150 mm; and

g. Mixing sheds in a fireworks manufactory shall be at a distance of 18 meters away from all other sheds if the quantity of chemical stored, handled or used in the mixing shed is less than 50 kilograms and be separated by baffle walls opposite to each exit of the mixing shed:

Provided that the distance shall be at least 21 meters, if the quantity of chemical stored, handled or used in the mixing shed exceeds 50 kilograms.

4. House-keeping

(a) Every part of ways, works, machinery and plant shall be maintained in a clean and tidy condition;

(b) Any spillage of materials shall be cleaned without delay;

(c) Close platforms, passages and gangways shall be kept free of temporary obstructions.

5. Electrical Equipment

(a) If at any time, use of electricity is allowed in the factory, all leads, etc., shall be in conduits with flame-proof junctions;

(b) Electrical supply shall never be through a lamp even with a non-conducting handle.

6. Protective clothing

(a) Under no circumstances clothes made of artificial fiber like terelene, etc., be allowed inside the factory ;

(b) All workers shall be supplied with asbestos aprons especially to cover the chest, gonads and thighs

(c) Breathing apparatus shall be used in mixing sheds to avoid workers inhaling poisonous fumes in the event of an untoward reaction.

(d) In mixing sheds where aluminium and magnesium powders arc used "anti-stat"

foot-wear to combat static electricity shall be supplied.

(e) All protective equipments shall be maintained in an efficient condition and also shall be maintained in a clean and hygienic condition.

7. Match Factories

In match factories --

(i) the residue of the head composition shall not in any way be mixed with the residue of the friction composition ;

(ii) the rooms comprising the two mixing departments, namely, (a) head composition and (b) friction composition shall be entirely separated from each other and the drains from these two departments shall be kept entirely separate ;

(iii) rubbish containing the residues of the head composition and friction composition shall be kept and burnt separately ;

(iv) department in which completed matches (matches with heads on) are stored shall be separated from all other departments by means of fire-proof walls and doors providing adequate means of escape in case of fire :

Provided that the Chief Inspector-cum-Facilitator may, subject to such conditions, as he may deem necessary, exempt any factory in existence on the first January 1935 , from the provisions of this clause ;

(v) Splints, veneers and other materials in excess of the quantity required for the day's manufacture shall be kept in separate rooms of the factory where no manufacturing process is carried on. No manufactured material shall be stored anywhere in the factory compound for more than five days after the manufacture except in the storage godowns;

Provided that nothing contained in this clause shall apply to splints and veneers in cases stored in peeling and box making departments;

(vi) Store room for matches shall be entirely separated by fire-proof walls from the buildings used for manufacture

(vii) The racks in the dipped splints room shall have sides top and the rear part provided with non-inflammable materials.

(viii) The process of packing shall be done in an area away from the place of manufacture to the satisfaction of the Inspector-cum-Facilitator ; and

(ix) No child shall be employed or permitted to work in any process directly connected with the manufacturing process up to final production of match sticks.

8. Precautions to be taken in connection with manufacture of fuses used in crackers, etc

(a) Bundles of fuses shall be handled by carrying and not dragging them on the floor;

(b) Drying of fuses after wrapping shall be carried out on platforms away tram workrooms;

(c) Cutting shall be done by experienced workers employed only for this purpose and under proper supervision;

(d) Cutting shall be done on a large masonry platform covered with a tarpaulin and kept free from grit and pebbles;

(e) Cutting shall be done on a raised platform so that workers can work standing. Cutting must be done by placing the fuse on wooden sleepers kept over blocks of wood. Brick shall not be used beneath the wooden reapers; and

(f) Workers, while on dangerous operations, shall not wear clothing sewn with ferrous or steel buttons, buckles or attachments. They shall not carry on their persons, iron knives, keys, etc.

9. General

(a) No person other than a factory worker and/or an inspecting officer or others connected with the manufacturing process shall be allowed to enter the working area;

(b) Cardboard containers and trays without steel nails shall be used for storage and day-to-day working purposes.

(c) During the manufacture of fuses only brass or non-ferrous knives shall be used and drying of fines shall be away from all workrooms.

(d) Door mats shall be provided outside the workroom and near all drying platforms and where fuses are cut for the workers to clean their feet.

(e) At no time, mixing materials shall exceed the quantity that is required for the manufacture of mixing for half an hour operation only.

(f) For filling up chemicals in the inner tubes of crackers, only aluminium or plastic rings shall be used and not galvanized iron rings.

(g) Buckets, containers, hoops, locks, nails, screws, bolts, nuts, knives, scissors, hinges, latches etc., made up of iron shall not be used within the factory premises.

(h) Wooden racks without iron nails shall be used for drying paper cap sheets, in amorces factories.

(i) Wooden racks used for drying paper cap sheets shall be provided with asbestos or other fire resistant sheets on the three sides leaving the front side open.

(j) Dried paper cap sheets shall be carried in wooden trays with four compartments (partitions) each compartment (partition) carrying a single sheet.

(k) Each manufacturing shed of fireworks shall have atleast two doors facing each other. The doors provided to the work sheds of adjacent rows shall not face each other.

(l) Not more than four persons shall be employed or allowed at any one time in any one building in which explosive is being manufactured.

(m) Copper plates shall be fixed on the baffle wall of the chemical mixing shed and chemical filling shed; and the workers before entering those sheds, shall place their hands on the copper plates in order to discharge the electrostatic charges from their body and to protect them from any untoward fire or explosion.

(n) Workers aged above 55 years shall be employed only in non-explosive areas.

(o) No person, aged 50 years and above shall be employed in Fireworks Manufactory unless his eyesight including colour vision and his hearing capacity are examined and declared fit by a qualified ophthalmologist and ENT specialist, respectively, to work

whether with or without use of corrective appliances. Such examinations shall be made atleast once in every two years. Record of examination or re-examination carried out shall be produced on demand to Inspector-cum-Facilitator at the time inspection.

(p) Work benches and tables shall be provided for mixing and filling operations.

(q) Blast walls shall be provided around the drying platform at a distance of 2 meters away from the drying platform. The height of the blast wall shall be atleast one foot more than that of the height of the drying platform.

(r) In every Fireworks Factory, there shall be appointed a Supervisor with minimum qualification of B.Sc. (Chemistry) or Diploma in Chemical Engineering or its equivalent. He shall be fully conversant with the process of manufacture of fireworks and the associated hazards. These Supervisors shall undergo special training of fireworks safety as approved by the Chief Inspector-cum-Facilitator. Number of Supervisors shall be at the rate of 1 for every 50 workers. Manufacture of fireworks shall be carried out under the supervision of such Supervisors.

(s) Factories which make fancy crackers shall have,

(i) separate colour pellet machine shed ;

(ii) separate colour pellet drying shed ; and

(iii) separate transit rock for storing colour pellets.

(t) Not more than one manufacturing activity at any one item of crackers shall be allowed or required to be done in any working shed at a time.

(u) The workers involved in mixing and filling operations shall have an education qualification of atleast Higher Secondary Course.

(v) The drying platform meant for Rockets and Fire Works of flying nature shall be provided with a temporary roof of a strong aluminium mesh cover resting on the baffle wails, for protection from direct sunlight.

(w) There shall be provided atleast two burning pits in every factory and each burning pit shall be at a minimum distance of 62 meters away from the working sheds.

(x) The collected waste shall be disposed in the burning pit after the working hours of the factory on the same day in the presence of the Foreman by a trained worker.

(y) Wind direction indicator shall be provided in each factory.

(z) No electronic appliances such as mobile phones, transistors etc., shall be allowed in the premises, where fireworks are manufactured, handled, stored or used.

(aa) The mixed chemicals shall be used on the same day. No mixed chemical (fireworks) composition, dry or wet shall be kept in the factory at the close of any working day. Such residual composition shall be safely destroyed at the close of the day.

(bb) Fireworks factory ordinarily employing 250 workers or more shall appoint a qualified Safety Officer as per the Andhra Pradesh Safety Officer (Duties, Responsibilities and Conditions of Serves, 2005 at the rate of one Safety Officer for 250 workers.

(cc) No manufacturing activity shall be carried on in Fireworks factory between 6.00 pm. And 6.00 am.

10. Display of notices

The following notices in the local language understood by the majority of workers shall be displayed at a conspicuous place in the factory.

i. Smoking is strictly prohibited.

ii. No one shall carry matches or other igniting materials into the factory.

iii. No worker shall be in a workroom or area where no work has been assigned to him.

iv. If anything untoward happens in any shed all workers shall dash to the gates which serve as outgates of the factory and in no circumstances be curious to see what has happened in the affected shed.

v. Any spillage of materials should be cleaned without any delay.

vi. Wearing of clothes made of artificial fiber like terene, etc., is prohibited. Clothing's sewn with ferrous or steel buttons or buckles or attachments should not be worn.

vii. Foot wears with iron nails should not be used-(It) Workers should not carry with themselves iron knives and iron keys, etc.

11. First-aid boxes

(b) The materials required under rule 65 shall be kept in the First-Aid Box. In addition, four stretchers shall be available for every twenty persons employed in the premises.

(c) Adequate amount of burn dressings and 24 ounces of coconut oil to be used as the first remedy for burns shall be kept in the First-Aid Box.

(d) Persons who are in charge of First-Aid Boxes shall be those who possess the certificate granted by the St. John's Ambulance Association for rendering first-aid.

12. **Medical Examination by Medical Officer:**

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The pre-employment medical examination shall include skin test for Dermatitis,

Pulmonary Function Test and Chest X-ray.

(4) The periodical re-examination shall, wherever the Health Surveillance Officer considers appropriate, include all the tests of pre-employment except the chest X-ray which shall be carried out at least once in three years.

(5) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(6) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(7) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(8) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(9) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

SCHEDULE – XXXII
HANDLING AND PROCESSOING COIR FIBRE

1. Application

This schedule shall apply to all factories or part of factories in which any of the following operations involving coir fibre is carried on.

(a) hammering

(b) harvesting

(c) defibering/decortication

(d) spinning/curling

(e) bleaching

(f) dyeing

(g) spooling and bailing

(h) PVC tufting

(i) Weaving

(j) Shearing

(k) rubber backing

(1) latex backing

(m)stenciling

(n) flocking

2. Definition

(a) Dangerous Chemical: Any chemical used in any of the operations listed inclause 1 shall be considered as dangerous chemical for the purpose of this Schedule.

3. **Declaration of operations as dangerous:** Harvesting, defibering,bleaching, dyeing, Tufting, rubber backing, shearing, stenciling, flocking and latex backing of coir are declared to be dangerous operations when carried out in any factory.

4.**Prohibition of Employment of women and young persons:**

(a) No young person shall be employed or permitted to work in any operation specified in clause 1.

(b) No woman shall be employed or permitted to work in any operation specified in clause 3.

5.**Storage and Handling of dangerous of chemicals:** Whenever anydangerous chemical is handled, stored or used, all necessary steps shall be taken to prevent inhalation, ingestion or absorption of this chemical by workers while engaged in operations specified in clause 1.

6.**Seating arrangement:** Suitable seating arrangements shall beprovided for the workers engaged in manual defibering and manual hammering operations.

7.**Ventilation:** Bleaching and dyeing operation shall be carried outseparately away from otheroperations. Effectivearrangementsshall be made to prevent escape of fumes in the work environment.

8.Escape of dust and fumes: Suitable and adequate arrangementsshall be made for preventing escape of dust and fumes in work environment.

9.**Personal Protective Equipment.**

(a)The occupier shall provide the following for free of cost and maintain in good condition for use of all persons engaged in the operations mentioned in the Clause 3:

(i) suitable gloves of durable quality for both hands.

(ii) rubber boots of durable quality for both legs.

(iii) goggles

(iv) nose mask

(v) any other appliances, which in the opinion of Chief Inspector cum facilitator shall be necessary for protection of the workers.

(b) All persons engaged in operations specified in clause 3, while at work in these operations make use of the material and appliances provided.

10. **Food and drink:**

(i)No food or drink shall be brought into any room in which any of the operations specified in clause 3 is carried on.

(ii)No food or drink shall be consumed in any room in which any of the operations specified in clause 3 is carried on.

11. **Floor of workrooms:** The floor of every room in which any of the operations specified in clause 3 is carried on shall be:

(i) of cement or similar material so as to be smooth and impervious.

(ii) maintained in sound condition; and

(iii) provided with suitable and adequate arrangements for drainage.

12. **Washing facilities:**

(a) The occupier shall provide and maintain for the use of all persons employed in operation specified in clause 3, suitable washing facilities consisting of.

(i) a water tank capable of holding sufficient water and having taps at the rate of one tap for every ten persons employed at any one time. The floor around the tank and below the taps shall be cement plastered and maintained in sound and clean conditions. Suitable and adequate arrangements for drainage shall be provided around the tanks and the taps; and

(ii) sufficient supply of nail brushes, soap or other suitable cleaning material and clean towels.

(b) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.

13. **Medical Examination:**

(1) The occupier of every factory to which the schedule applies, shall

(a) employ a Health Surveillance Officer for medical surveillance of the workers employed therein.

(b) provide to the said Health Surveillance Officer all the necessary facilities for the purpose referred to in clause (a).

(2) Workers employed in this scheduled process / operation shall be medically examined by the Health Surveillance Officer-

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six (6) months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are

exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in Health Register in Form: HR which shall be kept readily available for inspection by the Inspector-cum-Facilitator.

(4) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself.

(5) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(6) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of his employment in the scheduled Process/operation or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(7) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

14. **Exemptions:** The Chief Inspector cum facilitator of Factories may grant exemption from the operation of any clause of the Schedule to the extent he deems suitable, where he is satisfied that their observations are not necessary for safeguarding the health of the workers.

SCHEDULE - XXXIII
MANUFACTURING AND PROCESSING OF TEXTILES

1. Application

The requirements of this schedule shall apply to factories engaged in the manufacture or processing of textiles other than jute textiles. The schedule would not apply to factories engaged exclusively in the manufacture of synthetic fibers.

2. Definitions

For the purposes of this schedule –

(a) Textile manufacturing process" means it involves production or conversion of textile fibre through a defined process into a product. This includes ginning, spinning, weaving, knitting , dyeing and other processes incidental thereto.

(b) "Operation in centrifugal machines " means operations that use centrifugal force for seperation, filtration and other related operations therein.

(c) "Calendar" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calendars may have two to ten rollers, or bowls, some of which can be heated.

(d) "Embossing calendar" means a calendar with two or more tolls, one of which is engraved for producing figure effects of various kinds on a fabric.

(e) "card" means a machine consisting of cylinders of various sizes and in certain cases fiats covered with card clothing and set in relation to each other so that fibers to staple form maybe separated into individual relationship. The speed of the cylinders and their direction of rotation varies. The finished pro-duct is delivered as a sliver. Cards of different types are: the revolving flat card, the roller and clearer card, etc.

(f) "card clothing" means the material with which the surfaces of the cylinder,duffer, fiats, etc , of a card are covered and consists of a thick foundation material made of, either textile fabrics through which are pressed many fine closely spaced specially bent wires, or mounted saw toothed wire.

(g) "Comber" means a machine for combing fibers of cotton, wool, etc. The essential parts are device for feeding forward a fringe of fibers at regular intervals and an arrangement of combs or pins. Which, at the right time pass through the fringe. All tangled fibers, shore fibers, and nibs are removed and the long fibers are laid parallel.

(h) "combined machinery" means a general classification of machinery including combers sliver lab machines, ribbon lab machines and gill boxes, but excluding cards.

(i) "Rotary staple cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibers into staple lengths.

(j) "Garnett machine " means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk, etc Essentially, such machines consist of a licker-in ; one or more cylinders, each having a complement worker and stripper rolls ; and a fancy roll and doffer. The action of such machines is some-what like that of a wool card, but it is much more severe in that the various rolls are covered with garnet wire instead of clothing.

(k) "Gill box" means a machine used in the worsted system of manufacturing yarns. Its function is to arrange fibers in parallel order. Essentially, it consists of a pair of feed rolls and a series of followers where the followers move at a faster surface speed and perform a combing action.

(l) "In-running rolls" means any pair of rolls or drums between which there is a "nip ".

(m) "Interlocking arrangement " means a device that prevents the setting in motion of a

dangerous part of a machine or the machine itself while the guard cover or door provided to safeguard against danger is open or unlocked, and which will also hold the guard cover or door closed and locked while the machine or the dangerous part is in motion.

(n) "Kier" means a large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached, etc.

(o) "Ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb; its purpose is to provide a uniform lap in which the fibers have been straightened as much as possible.

(p) “Silver Lapper" means a machine or a part of a machine in which a number of parallel card covers are drafted slightly, laid side by side in a compact sheet and wound into a cylindrical package.

(q) "Loom" means a machine for effecting the inter-locking of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through beadles and reeds. The filing it shot across in a shuttle and settled in place by reeds and slay, and the fabric is wound on a cloth beam.

(r) "Starch mangle" means a mangle that is used specifically for starching cotton goods. It commonly consists 'of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution.

(s) "Water mangle" means a calendar having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics

(t) "Mule" means a type of spinning frame having a bead stock and a carriage as its two main sections. The head stock is stationary. The carriage is movable and it carries the spindles which draft, and spin the ravine into yarn. The carriage extends over the whole width of the machine and moves slowly towards and sway from the head stock during the spinning operation.

(u) "Nip" is the danger zone between two rolls or &Urns which by virtue of their positioning and movement create a nipping hazard.

(v) "Openers and pickers" means a general classification of machinery which includes breaker pickers, intermediate pickers, finisher pickers, single process pickers, multiple process pickers, willow machines card and picker waste cleaners, thread extractors, shredding machines, roving waste openers, shoddy pickers, bale breakers, feeders, vertical openers, lattice cleaners, horizontal cleaners and any similar machinery equipped with either cylinders screen section, calendar section, rolls, or beaters used for the preparation of stuck fur further processing.

(w) "Paddler" means a trough for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordant or dye bath.

(x) "Plaiting machine" means machine used to lay cloth into floods or regular length for convenience or subsequent process or use.

(y) "Roller printing machine" means a machine consisting of a large central cylinder or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color through), a furnisher roller, doctor blades, and tic. The machine is used for printing fabrics.

(z) "Continuous bleaching range" means a machine for bleaching of cloth in rope or open-width form with the following arrangement. The cloth after wetting out pass through a squeeze roll into a saturator containing solution of caustic soda and then to an enclosed 1-Box. A V-shaped arrangement is attached to the front part of the J-Box for uniform and rapid saturation of the cloth with steam before it is packed down in the J-Box. The cloth, in a single strand rope form passes over a guide roll down the first arm of the 'V' and up the second. Steam is injected into the 'V' at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point. The J-Box capacity is such that cloth will remain hot for a sufficient time to complete the scouring action. It then passes a series of washers with a squeeze roll in-between. The cloth then passes through a second set of saturator, J-Box, and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open-width cloth.

(aa) "Mercerizing range" means a 3-bowl mangle, a tentee frame, and a number or boxes for washing and scourging. The whole set up is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated, and washing out most of the caustic before releasing tension.

(bb) "Sanforizing machine" means a machine consisting of a large steam-heated cylinder, and endless, thick, woolen felt blanket which is in close contact with the cylinder for most of its perimeter, and an electrically heated shoe which presses the cloth against the blanket while the latter is in as tretched condition as it curves around feed-in roll, (aa) "Shearing machine" means a machine used for shearing cloth. Cutting action is provided by a number of steel blades spirally mounted on a roller. The roller rotates in close contact with a fixed ledger blade. There may be from one to six such rollers on a machine.

(cc) "Sinning machine" means a machine which comprises of a heated roller, plate, or an open gas flame. The cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame to remove fun or hairiness by burning.

(dd) "Slasher" means a machine used for applying a size mixture to warp yarns. Essentially, it consists of a stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for winding they are on the loom beams.

(ee) "Tenter frame" means a mashing for drying cloth under tension. It essentially consists of a pair of endless travelling chains fitted with clips of fin pins and carried on tracks. The cloth is firmly held at the selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width.

(ff) "Wrapper" means a machine for preparing and arranging the yarns intended for the warp of a fabric specifically a beam warped.

3. General safety requirements

(1) Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines. Belt shifter on machines driven by belts and shifting should be provided with a belt shifter lock or an equivalent positive locking device.

(2) Stopping and starting handles or other controls shall be of such design and so

positioned as to prevent the operator's hand or fingers from striking against any moving part or any other part of the machine.

(3) All belts, pulleys, gears, chains, sprocket wheels, and other dangerous moving parts of machinery which either form part of the machinery or arc used in association with it, shall be securely guarded.

4. Openers and pickers

(1) In all opening or picker machinery, beaters and other dangerous parts shall be securely fenced by suitable guards so as to prevent contact with them. Such guards and doors or covers of openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement;

Provided that in the case of doors or covers of openings giving access to any dangerous part other than heater covers, instead of the interlocking arrangement, such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively locked in position or fixed in such a manner that it cannot be removed without the use of hand tools.

(2) The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation.

(3) The lap forming roller shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as, the weighted rack is down. The guard or cover shall be so locked that it cannot be raised until the machine is stopped, and the machine cannot be started until the cover or guard is closed:

Provided that the foregoing provision shall not apply to the machines equipped with automatic lap forming devices:

Provided further that any such machine equipped with an automatic lap forming device shall not be used unless the automatic lap forming device is in efficient working order.

5. Cotton cards

(1) All cylinder doors shall be secured by an interlocking arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed. Provided that the latter requirement in respect of the automatic locking device shall not apply while stripping or grinding operations are carried out:

Provided further that stripping or grinding operations shall be carried out only by specially trained adult workers wearing tight fitting clothing.

(2) The licker-in shall be guarded so as to prevent access to the dangerous parts.

(3) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping/grinding operations without having to either shift the main belt to the fast pulleys of the machine or to dismantle the interlocking mechanism. Such an arrangement shall be used only for stripping or grinding operations.

6. Garnett machines

(1) Garnett licker-ins shall be enclosed.

(2) Garnett fancy rolls shall be enclosed by guards. These shall be installed in a way that keep worker relic reasonably accessible for removal or adjustment.

(3) The underside of the garnets shall be guarded by a screen mesh or other form of enclosures to prevent access.

7. Gill boxes

(1) The feed end shall be guarded so as to prevent fingers being caught in the pins of the intersecting falters.

(2) All nips of in-running rolls shall be guarded by suitable nip guards conforming to the following specifications:

Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening and in any circumstances, the maximum width of the opening shall not exceed the following:

Distance of opening from nip point	Maximum width from of opening
0 to 38 mm	6 mm
39 to 63 mm	10 mm
64 to 88 mm	13 mm
89 to 140 mm	15 mm
141 to 165 mm	19 mm
166 to 190 mm	22 mm
191 to 219 mm	32 mm

8. Silver and ribbon tappers (cotton)

The calendar drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.

9. Speed frames

Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement.

10. Spinning mules

Wheels on spinning mule carriages shall be provided with substantial wheel guards, extending to within 6mm of the rails.

11. Warpers

Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters/min. These gates shall have interlocking arrangement, except for the purpose of inching or jogging: Provided that the top and bottom ban of the gate shall be at least

1.05 and 0.53 meters high from the floor or working platform, and the gate shall be located 38mm from the vertifial tangement to the beam head.

12. Slashers

(1)Cylinder Dryers.

(a) All open nipe of in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 2.

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point.

(c) Slashers operated by push button control shall have stop and start buttons located at each end of the machine and additional buttons located on both sides of the machine at the size box and the delivery end. If calendar rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are equipped with an enclosed dryer as in paragraph (b)

(2)Enclosed hot air dryer

(a) All open nips of the top squeezing rollers shall be guarded by nip guards conforming to the requirements in paragraph 7 (2).

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point.

(c) Slashers operated by push button control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located on both sides of the machine at intervals spaced not more than 1.83 meters on centers.

13. Looms

(1) Each loom shall be equipped with suitable guards designed to minimize the danger from flying shuttles.

(2) Beam weights for tension in beam shall be of such construction so as to prevent it falling during its adjustment.

14. Valves of kiers, tanks and other containers

(1) Each valve controlling the flow of steam, injurious gases or liquids into a kier or any other tank or container into which a person is likely to enter in connection with a process, operation, maintenance or for any other purpose, shall be presided with a suitable locking arrangement to enable the said person to lockthe valve securely in the closed position and retain the key with him before entering the Icier, tank or container.

(2) Wherever boiling tanks, caustic tanks and any other containers from which liquids which are hot; corrosive or toxic may over flow or splash, are so located that the operator cannot see the contents from the floor or working area emergency shut off valves which can be controlled from a point not subject todanger or splash shall be provided to prevent danger.

15. Shearing machines

All revolving blade on shearing machine shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed 10 mm.

16. Continuous bleaching range (Cotton and rayon's)

The nip of all in-running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.

17. Mercerizing range (piece goods)

(1) A stopping device shall be provided at each end of the machine.

(2) A guard shall be provided attach end of the frame between the in-running chain and the dip opener.

(3) A nip guard shall be provided for the in-running rolls of the mangle and washers and the guard shall conform to the requirements in paragraph 7 (2).

18. Tenter frame

(1) A stopping device shall be provided at each end of the machine.

(2) A guard shall be provided at each end of the machine frame at the in-running chain and the clip opener.

19. Paddels

Suitable nip guard conforming to the requirement in paragraph 7 (2) shall be provided to all dangerous in-running rolls.

20. Centrifugal extractors

(1) Each extractor shall be provided with a guard for the basket and the guard shall have inter-locking arrangement.

(2) Each extractor shall be equipped with a mechanically or electrically operatedbrake to quickly stop the basket when the power driving the basket is shutoff.

21. Squeezer or wringer extractor water mangle, starch mangle, backwasher (worsted yarn crabbing machines, and decating machines)

All in-running rolls shall be guarded with nip guards conforming to the requirements in paragraph 7 (2).

22. Sanforizing and palmer machines

(1) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements in paragraph 7 (2).

(2) Access from the sides to the nips of in-running rolls should be fenced by suitable side guards.

(3) A safety trip rod cable or wire centre cord shall be provided across the front and

back of all palmer cylinders extending the length of the fact of the cylinder. It shall operate readily whether pushed or pulled. The safety trip shall not be more than 170 cm above the level at which (sic) thefrom splashing theoperator, the floor or working surface.

23. Rope washers

(1) Splash guards shall be installed on all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor, or working surface.

(2) A safety rip rod, cable or wire centre cord shall be provided across the front and the back of all rope washers extending the length of the face of the washer. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 170 cm. above the level on which the operator stands andshall be readily accessible.

24. Laundry washer, tumbler or shaker

(1) Each drying tumbler, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an inter-locking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shell is open, and which will also prevent the outer door on the case or shell from being opened, without shutting off the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device.

(2) Each closed barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders or shells while it is being loaded or unloaded.

25. Printing machine (Roller type)

(1) All in-running rolls shall be guarded by nip guards conforming to the requirement in paragraph 7 (2).

(2) The engraved roller gears and the large crown wheel shall be guarded.

26. Calendars

The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so constructed that the cloth can be fed into the rolls safely.

27. Rotary staple cutters

The cutter shall be protected by a guard to prevent hands reaching the cutting zone.

28. Plating machines

Access to the trip between the knife and card bar shall be prevented by a guard.

29. Hand baling machine

An angle iron handle-stop guard shall be installed at right angle to the frame of the machine. The stop guard shall be so designed and so located that it will prevent the handle from travelling beyond the vertical position should the handle slip from the operator's hand when the pawl has been released from the teeth of the take up gear.

30. Flat work ironer

Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the seed or first pressure rolls, so arranged that the striking of the bar or guard by the-hand of the operator or other person will stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than1.83 meters.

66. Site appraisal committee prescribed under Section 83.-

(1) Constitution: -'The following provisions shall govern the functioning of the Site appraisal committee, hereinafter, be referred to as the 'Committee' in these rules:-

(a) The State Government may constitute a site Appraisal Committee and reconstitute the Committee as and when necessary ;

(b) The State Government may appoint a senior official of the factories Inspectorate, preferably with qualification in Chemical Engineering to be the Secretary of the Committee;

(c) The State Government may appoint the following as members of the Committee:

(i) a representative of the Fire Service Organisation of the State Government;

(ii) a representative of the State Department of Industries

(iii)a representative of the Director General of Factory Advice Service and Labour Institutes, Bombay.

(2) No member, unless required to do so by a Court of Law, shall disclose otherwise than in connection with the purpose of the Act, at any time any information relating to manufacturing or commercial business or any working process which may come to his knowledge during the tenure as a Member on this Committee.

(3) Applications for appraisal of sites-

(a) Application for appraisal of sites in respect of the factories covered under section 2 (cb) of the Act shall be submitted to the Chairman of the Site Appraisal Committee.

(b) The application for site appraisal along with 15 copies thereof shall be submitted in the Form annexed to this Rule. The Committee may dispense with furnishing information on any particular item in the application form if it considers the same may not be relevant to the application under consideration.

(4) Function of the Committee-

(a) The Secretary shall arrange to register the applications received for appraisal of site in a separate register and acknowledge the same within a period of 7 days.

(b) The Secretary shall fix up meeting in such a manner that all the applications received and registered and referred to the committee within a period of one month from that of their receipt.

(c) The committee may adopt a procedure for its working keeping in view of the need for expeditious disposal of application.

(d) The committee shall examine the application for appraisal of a site with reference to the prohibitions and restriction on the location of industry and the carrying on of process and operations in different areas as per the provisions of Rule 5 of the Environment (protection) Rules, 1986 framed under Environment Protection Act, 1986.

(e) The committee may call for documents, examine experts, inspect the site if necessary and take other steps for formulating its views in regard to the suitability of the site.

(f) Wherever the proposed site requires clearance by the Ministry of Industry or the Ministry of Environment and Forests, the application for site Appraisal will be considered by the Site appraisal committee only after such clearance has been received.

FORMAT OF APPLICATION TO THE SITE APPRAISAL COMMITTEE

1. **Name and address of the applicant**:

2. **Site Ownership Data:**

(1) Revenue details of site such as Survey No. Plot No. etc.

(2) Whether the site is classified as forest and if so, whether approval of the Central Govt., under section 5 of the Indian Forests Act, 1927 has been taken.

(3) Whether the proposed site attracts the provisions of section 3 (2) (v) of the E.P. Act, 1986, if so, the nature of the restrictions.

(4) Local authority under whose jurisdiction the site is located.

3. **Site Plan..-**

(1) Site plan with clear identification of boundaries and total area proposed to be occupied and showing the following details nearby the proposed site.

(a) Historical monuments, if any, in the vicinity.

(b) Names of neighbouring manufacturing units and human habitats, educational and training institutions, petrol installations, storages of LPG and other hazardous substances in the vicinity and their distance from the proposed unit.

(c) Water sources (rivers, streams, canals, dams, water filtration plants, etc.) in the vicinity.

(d) Nearest hospitals, fire-stations, civil defence stations and police station and their distances.

(e) High tension electrical transmission lines, pipe lines for water, oil gas or sewerage, railway lines, roads, stations: jetties and other similar installations.

(2) Details of spill conditions and depth at which hard strata obtained.

(3) Contour map of the area showing nearby hillocks and difference in levels.

(4) Plot Plan of the factory showing the entry and exit points, reads within, water drains, etc.

4. **Project Report:-**

(1) A summary of the salient features of the Project

(2) Status of the organisation (Govt. Semi-Govt.) Public or Private etc.)

(3) Maximum number of persons likely to be working in the factory.

(4) Maximum amount of power and water requirements and source of their supply.

(5) Block diagram of the buildings and installations, in the proposed supply.

(6) Details of housing colony, hospital, school and other infrastructural facilities proposed.

5. **Organisation structure of the proposed Manufacturing Unit / Factory..-**

(1) Organisation diagrams of
- proposed enterprise in general

- Health, Safety and Environment protection departments and their linkage to operation and technical departments

(2) Proposed health and Safety Policy

(3) Area allocated for treatment of wastes and effluent.

(4) Percentage outlay on safety, health and environment protection measures.

6. **Meteorological data relating to the site:-**

(1) Average, minimum and maximum of
- Temperature
- Humidity
- Wind velocities during the previous ten years.

(2) Seasonal variations of wind direction

(3) Highest water level reached during the floods in the area recorded so far

(4) Lightening and seismic data of the area

7**. Communication links..-**

(1) Availability of Telephone/Telex/Wireless and other communication facilities for outside communication

(2) Internal communication facilities proposed.

8. Manufacturing Process Information..-

(1) Process flow diagram

(2) Brief write up on process and technology

(3) Critical process parameters such as pressure build-up temperature else and run-away reactions.

(4) Other external effects critical to the process having safety implications, such as ingress of moisture of water, contact with incompatible substances, sudden power failure.

(5) Highlights of the built in safety pollution control devices or measures/ incorporated in the manufacturing technology.

9**. Information of Hazardous Materials:-**

(1) Raw materials, intermediates, products and by-products and their quantities (Enclose Material Safety Data Sheet in respect of each hazardous substance).

(2) Main and intermediate storage proposed for raw materials/ intermediates/products/byproducts (Maximum quantities to be stored at any time).

(3) Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.

(4) Safety measures proposed for:
- handling of materials
- internal and external transportation; and
- disposal (packing and forwarding of finished products)

10.Information on disposal / Disposal of wastes and Pollutants:-

(1) Major pollutants (gas, liquid, solid) their characteristics and quantities (average and at peak loads)

(2) Quality and quantity of solid wastes generated, method of their treatment and disposal.

(3) Air, Water and solid pollution problems anticipated and the proposed measures to control the same including treatment and disposal of effluents.

11. Process Hazards Information:-

(1) Enclose a copy of the report on environmental impact assessment.

(2) Enclosed a copy of the report on Risk Assessment Study.

(3) Published (open or classified) reports, if any, on accident situations/ occupational health hazards or similar plants elsewhere (within or outside the country).

12. Information of proposed safety and occupational Health Measures.-

(1) Details of fire fighting facilities and minimum quantity of Water, CO2 and or other fire fighting measures needed to meet the emergencies.

(2) Details of in-house medical facilities proposed.

13**. Information on Emergency Preparedness.-**

(1) On site emergency plan.

(2) Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.

14. Any other relevant information..-

I certify that the information furnished above is correct to best of my knowledge and nothing of importance has been concealed while furnishing it.

Name and signature of
the Applicant

Rules prescribed under Section 84:

67. Collection, Development and Dissemination of Information

(1) The occupier of every factory carrying on a 'hazardous' process' shall arrange to obtain or develop information in the form of Material Safety Data Sheet (MSDS) furnishing adequate information in respect of every hazardous substance or material handled in the manufacture, transportation and storage in the factory. It shall be accessible upon request to a worker for reference. A model MSDS is appended below.

MATERIAL SAFETY DATA SHEET

<table>
<tr><td colspan="6">1.CHEMICAL IDENTITY</td></tr>
<tr><td colspan="2">Product Name</td><td colspan="4">Chemical Designation</td></tr>
<tr><td colspan="2">Trade Name</td><td colspan="4">Synonyms</td></tr>
<tr><td>Formula</td><td colspan="2">Label:
Class</td><td>Category</td><td>CAS
Number</td><td>UN
Number</td></tr>
<tr><td rowspan="2">Regulated
Identification</td><td colspan="2">Shipping Name/Codes/Label</td><td colspan="3">HAZCHEM Code</td></tr>
<tr><td>Hazardous
Identification</td><td>Waste Number</td><td></td><td></td></tr>
<tr><td></td><td colspan="2">Hazardous Ingredients</td><td colspan="3">CAS Number</td></tr>
<tr><td colspan="6">1.
2.
3.
4.</td></tr>
<tr><td colspan="6">2. PHYSICAL AND CHEMICAL DATA</td></tr>
<tr><td colspan="2">PhysicalState:
(Gas,Liquid-,Solid-)</td><td colspan="2">Boiling point in degree C</td><td colspan="2">Vapourpressureat35
degreeC--mmHg.</td></tr>
<tr><td colspan="2">Appearance</td><td colspan="2">Melting/Freezing point in
degree C</td><td colspan="2">Evaporationrateat30 degreeC</td></tr>
<tr><td colspan="2">Odour</td><td colspan="2">Vapour Density (air-1)</td><td colspan="2">Solubility in Water at 30
degree C</td></tr>
</table>

Others (Corrosivity) etc	Specific Gravity (Water-1)	PH

3. FIRE AND EXPLOSIVE HAZARDS DATA			
Explosion/ Flammability	Flash Point (deg.) C	LEL %	Auto ignition Temperature degree C
	Flash Point (deg.) C	UEL%	TDC Flammability (Classification)

4. REACTIVITY DATA		
Stability to	Impact (Hazardous Combustion products)	
	Static Discharge (Hazardous Decomposition product)	
	Reactivity	(Conditions to avoid)
Hazardous Polymerization	May/May not occur	(Conditions to avoid)
Incompatibility (Materials to avoid)		

5. HEALTH HAZARD DATA			
RoutesofEntry:(Inhalation,skin,mucousmembranes,eyecontactandingestion)			
Effects of Exposure/Symptoms			
LD 50 (in rat) (mg/kg body weight)	(Orally or percutaneous absorption)		LC50(inrat)(mg/1) 4/hours
Permissible Exposure Limit (PEL)	ppm. mg/cu. m.	Short Term Exposure Limit (STEL)	ppm. mg/cu. m.
Threshold Limit Value (TLV)ofACGIH	ppm. mg/cu. m.	Odour Threshold	ppm. mg/cu. m.
Emergency Treatment:			

6. HAZARD SPECIFICATION					
NFPA Hazard	Signal	Health	Flammability	Stability	Special
Known Hazards:					

Combustible Liquid	Water Reactive Material	Irritant
Flammable Material	Oxidizer	Sensitizer
Pyrophoric Material	Organic Peroxide	Carcinogen

Explosive Material Unstable Material	Corrosive Material Compressed Gas	Mutagen Other (Specify)
7. PREVENTIVE MEASURES		
Ventilation	General/MechanicalLocal Exhaust	
Protective Equipment Required	Eyes (Specify) Respiratory (Specify) Gloves (Specify) Clothing (Specify) Others (Specify)	
Precautions	Handling & Storage Others (speedy)	
8. EMERGENCY & FIRST AID MEASURE		
Fire	Fire Extinguishing Media	
	Special procedures	
	Unusual Hazards	
Exposure (inhalation, skin, eye contact and ingestion)	First Aid Measures	
Spills	Step to be taken Waste Disposal Method	
9. ADDITIONAL INFORMATION		
11. MANUFACTURERS/SUPPLIER DATA		
Firm's Name	Standard packing	
Mailing Address		
Telephone Number		
Telex Number	Others	
Telegraphic Address		
Contact person in Emergency	Others	
	Emergency Telephone in Transit Areas	

Acronyms- and Glossary of terms:

- **CAS**: Chemical Abstract Service Registration Number.
- **UN Number**: United Nations Number

- **HAZCHEM CODE**: Emergency Action Code (EAC),allocated by the Joint Committee of Fire Brigade Operations, UK.
- **TDG Flammability**: Transport of Dangerous Goods --Flammability Classification by United Nations.
- **NFPA**: National Fire Protection Association, USA. LD 50 and LC 50 represent the dose in mg/kg of body weight and the concentration in mg/1 for 4 hours having lethal effect on 50% of the animals (rats) treated.
- **PEL**: Permissible Exposure Limit as laid down in the Statutes.
- **TLV**: Threshold Limit Value as laid down by the American Conference of Governmental Industrial Hygienists. (ACGIH), USA.
- **STE**L: Short Term Exposure Limit as laid down in the statutes or by the ACGIH.
- **GUIDELINES**: All efforts should be made to fill in all the columns. No column should be left blank. In case certain information is not applicable or available. N/APP or N/AV sign may be used.
- **DISCLAIMER:** The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose and is prescribed for the purpose of meeting the minimum requirement in compiling safety data of a chemical.

2) The occupier while obtaining or developing a Material Safety Data Sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If he becomes newly aware of any significant information regarding the hazards of a substance, or ways to protect against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable.

3) Labelling:

Every container of a hazardous substance shall be clearly labelled or marked to identify :

(a) the contents of the container

(b) The name and address of the manufacturer or importer of the hazardous substances;

(c) the physical and health hazards; and

(d) the recommended personal protective equipment needed to work safety with the hazardous substance.

68.Disclosure of information to workers

(1) The Occupier of a factory carrying on a hazardous process shall supply to all workers the following information in relation to handling of hazardous materials or substances in the manufacture transportation, storage and other processes

(i) Requirements of Sections 84 and 85 of the code ;

(ii) A list of hazardous processes carried on in the factory;

(iii) Location and availability of all Material Safety Data Sheets as per the schedule appended here to;

(iv) Physical and health hazards arising from the exposure to or handling of substances:

(v) Measures taken by the occupier to ensure safety and control of physical and health hazards;

(vi) Measures to be taken by the workers to ensure safe handling, storage and transportation of hazardous substances;

(vii) Personal Protective Equipment required to be used by workers employed in hazardous process or dangerous operations:

(viii) Meaning of various labels and markings used on the containers of hazardous substances;

(ix) Signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;

(x) Measures to be taken by the workers in case of any spillage or leakage of a hazardous substance;

(xi) Role of workers vis-a-vis the emergency plan of the factory. in particular the evacuation procedures; and

(xii) Any other information considered necessary by the occupier to ensure safety and health of workers.

(2) The information required by sub-rule (1) shall be compiled and made known to workers individually through supply of booklets or leaflets and display of cautionary notices at the work places.

(3) The booklets, leaflets and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers, and also explain to them.

(4) The Chief Inspector-cum-Facilitator may direct the Occupier to supply further information to the workers as deemed necessary.

69. Disclosure of information to general public& Local Authority:

(1) The Occupier of every factory carrying on a hazardous process shall take appropriate steps to inform the general public who are likely to be in the area which may be affected by an accident. Such information shall include, -

(i) (Name of the factory and address where situated;

(ii) Identification, by name and position of the person giving the information;

(iii) Confirmation that the factory has approval from the Directorate of Industrial Safety and Health and Pollution control board;

(iv) An explanation in simple terms of a hazardous process(es) carried on in the

premises;

(v) The common names of the hazardous substances used which could give rise to an accident likely to affect them, with an indication of their principal harmful characteristics;

(vi) Brief description of the measures to be taken to minimize the risk of such an accident in compliance with its legal obligations under relevant safety statutes;

(vii) Salient features of the approved disaster control measures adopted in the factory;

(viii) Details of the factory's emergency warning system for the general public;

(ix) General advice on the action, members of the public should take on hearing the warning;

(x) Brief description of arrangements in the factory, including liaison with the emergency services, to deal with the foreseeable accidents of such nature and to minimize their effects; and

(xi) Details of where further information can be obtained.

(2) The information prescribed in sub-rule (1) shall be in Telugu, English or in the language understood by majority of the public in the vicinity.

(3) The above information shall be furnished to the concerned Panchayat, Municipality or Corporation where the factory is situated.

70. Information on Industrial Wastes

(1) The information furnished under rules 90 and 91 shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes, and arrangements for their final disposal.

(2) It shall also include information on the quality and quantity of gaseous waste discharged through the stacks or other openings and arrangements such as provision of scrubbers, cyclone separators electrostatic precipitators or similar such arrangement made for controlling pollution of the environment.

71. Disclosure of information to the Chief Inspector-cum-Facilitator

(1) The Occupier of every factory carrying on "hazardous process" shall furnish in writing to the Chief Inspector-cum-Facilitator a copy of all the information furnished to the workers, General Public.

(2) A copy of compilation of Material Safety Data Sheets in respect of hazardous substances used, produced or stored in the factory shall he furnished to the Chief Inspector-cum-Facilitator and the local Inspector-cum-Facilitator.

(3) The Occupier shall also furnish any other information as required by the Chief Inspector-cum-Facilitator from time to time.

72. Health and Safety Policy

(1) The occupier of every factory carrying hazardous process except as provided for in sub-rule (2), shall prepare a written statement of his policy in respect of health and safety of workers at work.

(2) The Health and Safety Policy should contain or deal with:

(i) declared intention and commitment of the top Management to health, safety and environment and compliance with all the relevant statutory requirements;

(ii) organizational set up to carry out the declared policy clearly assigning the responsibility at different levels and;

(iii) arrangements for making the policy effective.

(3) In particular, the policy should specify the following

(i) arrangements for involving the workers;

(ii) intention of taking into account the health and safety performance of individuals at different levels while considering their career advancement;

(iii) fixing the responsibility of the contractors, sub-contractors, transporters and other agencies entering the premises;

(iv) providing a resume of health and safety performance of the factory in its Annual Report;

(v) relevant techniques and methods, such as safety audits and risk assessment for periodical assessment of the status on health, safety and environment and taking all the remedial measures;

(vi) stating its intentions to integrate health and safety, in all decisions, including those dealing with purchase of plant, equipment machinery and material as well as selection and placement of personnel;

(vii) arrangements for informing, educating and training and retaining its own employees at different levels and the public, wherever required;

(4) A copy of the declared Health and Safety Policy signed by the occupier shall be made available to the Inspector-cum-Facilitator having jurisdiction over the factory and to the Chief Inspector-cum-Facilitator;

(5) The policy shall be made widely known by

(i) making copies available to all workers including contract workers, apprentices, transport workers, suppliers, etc.;

(ii) displaying copies of the policy at conspicuous places; and

(iii) any other means of communication ; in a language understood by majority of workers.

(6) The occupier shall revise the Safety Policy as often as may be appropriate, but it shall necessarily be revised under the following Circumstances:

(i) Whenever any expansion or modification having implications on safety and health of persons at work is made; or

(ii) Whenever new substance(s) or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances;

73. Display of Cautionary Notice to Public

Notwithstanding anything contained on the information furnished by the occupier of a factory carrying hazardous process, the detail of Hazards and the measure to overcome such hazards arising from the exposure to hazardous substances evolved by the hazardous process or discharged as waste or accidental release, quantity of hazardous chemicals shall be prominently displayed near the factory entrance gate. Such display shall be in Telugu and in the language understood by the majority of the general public in the vicinity.

Rules prescribed under Section 85:

74. Medical Examination

(1) Workers employed in a "hazardous process" shall be medically examined by a qualified medical practitioner employed by the occupier of the factory hereinafter referred to as “Health Surveillance Officer”in the following manner:

(i) Once before employment, to ascertain the physical fitness of the person to do the particular job:

(ii) Once in a period of six months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Health Surveillance officer it is necessary to do so at a shorter interval in respect of any workers.

(iii)The details of pre-employment and periodical examinations carried out as aforesaid shall be recorded in the Health Register in Form: HR

(2) No person shall be employed for the first time without a Certificate of Fitness in Form: CF granted by the Health Surveillance officer. If the Health Surveillance officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector-cum-Facilitator who shall refer the matter to the Medical Officer whose opinion shall be final in this regard. If the Inspector-cum-Facilitator is also a Medical Officer, he may dispose of the application himself

(3) Any findings of the Health Surveillance officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Medical Officer who shall in turn, examine the concerned worker and communicate his findings to the occupier within thirty days. If the Medical Officer is of the opinion that the workers examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Medical Officer, fully incapacitated in which case the worker affected shall he suitably rehabilitated.

(4) A Medical Officer on his own motion or on a reference from an Inspector-cum-Facilitator may conduct medical examination of a worker to ascertain the suitability of

his employment in a hazardous process or for ascertaining his health status. The opinion of the Medical Officer in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

(5) The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Medical Officer and after making entries to that effect in the Health Register.

(6) The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

75. Occupational Health Centers

(1) In respect of any factory carrying on "Hazardous process" there shall be provided and maintained in good order an Occupational Health Centre with the services and facilities as per scale laid down hereunder:

(i) For factories employing up to 50 workers

(a) the services of a Health Surveillance Officer on retainership basis, in his clinic to be notified by the occupier. He will carry out the pre employment and periodical medical examination as stipulated in Rule 79 and render medical assistance during any emergency;

(b) a minimum of five persons trained in first-aid procedure amongst whom at least one shall always be available during the working period;

(c) a fully equipped first aid box.

(ii) For factories employing 51 to 200 workers

(a) shall have an occupational health centre. It is suggested that it shall have a room with a floor area of fifteen square meters with floors and walls made of smooth and imperious surface and adequate illumination and ventilation. It is suggested to have the equipment given in the Schedule annexed to this rule;

(b) a part-time Health Surveillance officer shall be in overall charge of the center who shall visit the factory at least twice in a week and whose services shall be readily available during medical emergencies;

(c) one qualified and trained dresser-cum-compounder on duty throughout the working period;

(d) a fully equipped first-aid box in all the departments.

(iii)For factories employing above 200 workers

(a) one full time Health Surveillance officer for factories employing up to 500 workers and one more Health Surveillance for every additional thousand workers or part thereof;

(b) shall have an Occupational Health Centre. It is suggested that it shall have two rooms with a floor area of fifteen sq. meters with floors and walls made

of smooth and impervious surface and adequate illumination and ventilation. It is suggested to have the equipment given in the Schedule annexed to this rule;

(c) there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period:

(d) the Occupational Health Centre shall be suitably equipped to manage medical emergencies;

(2) The Health Surveillance Officer required to be appointed under sub-rule (1) shall possess any recognised medical qualification as defined in the National Medical Commission Act, 2019 (30 OF 2019) and who is enrolled on a Indian Medical Register as defined in clause (e) and on a State Medical Register as defined in clause (l) of section 35, 36, 37 and 40 of the Act and possess a certificate of Training in Industrial Health of minimum three months duration recognized by the State Government

Provided that

(i) a person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;

(ii) the Chief Inspector-cum-facilitator may subject to such conditions as he may specify, grant exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment:

(3) The syllabus of the course leading to the above certificate, and the organisations conducting the Course shall be approved by the Directorate-General of Factory Advice Service and Labour Institutes or the State Government in accordance with the guidelines issued by the DGFASLI.

(4) Within one month of the appointment of a Health Surveillance Officer, the occupier of the factory shall furnish to the Chief Inspector-cum-Facilitator the following particulars

(i) Name and address of the Factory Medical Practitioner;
(ii) Qualifications;
(iii) Experience, if any; and
(iv) the sub-rule under which appointed.

THE SCHEDULE

SUGGESTIVE LIST OF EQUIPMENT FOR OCCUPATIONAL HEALTH CENTRE IN FACTORIES

1. A glazed sink with hot and cold water always available.
2. A table with a smooth topatleast180 cmx105 cm.
3. Means for sterilizing instruments.
4. A couch.

5. Two buckets or containers with close fitting lids.
6. A kettle and spirit stove or other suitable means of boiling water.
7. One bottle of spirit ammonia aromatics (120 ml.)
8. Two medium size sponges.
9. Two "Kidney" trays.
10. Four cakes of toilet, preferably antiseptic soap.
11. Two glass tumblers and two wine glasses.
12. Two clinical thermometers.
13. Two teaspoons.
14. Two graduated (120 ml.) measuring glasses.
15. One wash bottle (1000 cc) for washing eyes.
16. One bottle (one liter) carboliclotion1 in 20.
17. Three chairs
18. One Screen
19. One electric hand-torch.
20. An adequate supply of tetanus toxoid.
21. Coramine liquid (60 ml.)
22. Tablets—anti histaminic antispasmodic (25each.)
23. Syringes with needles - 2 cc., 5 cc. and 10 cc.
24. Two needle holders, big and small.
25. Suturing needles and materials.
26. One dissecting forceps.
27. One dress in forceps.
28. One scalpel.
29. One stethoscope.
30. Rubber bandage -- pressure bandage.
31. Oxygen cylinder with necessary attachments.
32. One Blood Pressure Apparatus.
33. One Patellar Hammer.
34. One Peak-Flow meter for lung function measurement.
35. One stomach washout.
36. Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process.
37. In addition

    (1)For Factories employing fifty one to two hundred

(1) Four plain wooden splints 900mm x 100mm x 6mm:

(2) Four plain wooden splints 350mm x 75mm x 6mm;

(3) Two plain wooden splints 250mm x 50mm x 12mm;

(4) 0ne pair artery forceps;

(5) Injections -- morphia, pethidine, atropine, adrenaline, coramine, Novocain (2 each);

(6) One surgical scissor;

(2) For Factories employing above two hundred workers

1. Eight plain wooden splints 900mm x 100mm x 6mm;
2. Eight plain wooden splints 350mm x 75mm x 6mm;
3. Four plain wooden splints 250mm x 50mm x 12mm:
4. Two pairs artery forceps;
5. Injections Morphia, pethadine, atropine, adrenaline. ceramine, novacain (4 each):
6. Two Surgical scissors.

76. Ambulance Van

(1) In any factory carrying on "hazardous process" there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with item as per sub-rule (2) and manned by a full-time Driver-cum-Mechanic and a Helper trained in first-aid for the purpose of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre:

Provided that a factory employing less than five hundred workers, may make arrangements for procuring such facility at short notice from a nearby hospital or other places to meet any emergency.

(2) It is suggested that the ambulance may have the following equipments: --

(i) General--

A wheeled stretcher with folding and adjusting devices with the head of the stretcher capable of being tilted upward;

Fixed suction unit with equipment;

Fixed oxygen supply with equipment;

Pillow with case; Sheets; Blankets Towels; Emesis bags; Bed pan; Urinal: Glass:

(ii) Safety equipment--

Flares with life of thirty minutes; Flood lights; Flash lights;

Fire Extinguisher dry powder type; Insulated gauntlets;

(iii) Emergency Care Equipment

(i)Resuscitation --

Portable suction unit; portable oxygen units: Bag; Valve; Mask; and operated artificial ventilation unit;

Airways; Mouthgags; Trachcctomy adapters; Short spine board; I.V. Fluids with administration unit;

B.P. Manometer -- Cup; Stethoscope;

(ii) Immobilization --

Long and short padded boards; Wire ladder splints;

Triangular bondage --Long and short spine boards;

(iii) Dressings --

Gauze pads -- 4 x 4; — Universal dressing 10 x 36;

Roll of aluminum foils; -- soft roller bandages 6 x 5" yards; Adhesive tape in 3 "roll; Safety pins;

Bandage Sheets; Burn sheet;

(iv) Poisoning --

Syrup of Ipecac; Activated charcoal pre-packeted in dozes; Snake bite kit; Drinking Water;

(v) Emergency Medicines --

As per requirement (under the advice of Medical Practitioner only)

77. Decontamination facilities

In every factory, carrying out hazardous process the following provisions shall be made to meet emergency:

(i) Fully equipped first-aid box;

(ii) readily accessible means of water for washing by workers as well as for drenching the clothing of workers who have been contaminated with hazardous and corrosive substance; and such means shall be as per the scale shown in the Table below :--

THE TABLE

Number of Persons employed at any time	**Number of drenching showers**
(1)	**(2)**
(i) Up to 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 50 or part thereof.
(iii) Between 201 to 500 workers	5 +1 for every additional 100 or part thereof

(iv) 501 workers and above	8+1 for every additional 200or part thereof

(iii)A sufficient number of eye wash bottles filled with distilled water of suitable liquid kept in boxes or cup-boards conveniently situated and clearly indicated by distinctive sign which shall be visible at all times.

78.Making available Health Records to Workers

(1) The Occupier of every factory carrying out an "hazardous process" shall make accessible the health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records of any worker for his perusal under the following conditions:

(i) Once in every six months or immediately after the Medical examination whichever is earlier:

(ii) If the Factory Medical Practitioner is of the opinion that the worker has manifested signs and symptoms of any notifiable disease as specified in the Third Schedule of the Code;

(iii) If the worker leaves the employment;

(iv) If any one of the following authorities so direct-

An Inspector-cum-Facilitator notified under the code;

District Health Officer;

The Commissioner of Workmen's Compensation:

The Director General, Employees' State Insurance Corporation:

The Director, Employees' State Insurance Corporation (Medical Benefits); and

The Director-General, Factory Advice Service and Labour Institutes.

(2) A copy of the up to-date health records including the records of worker's exposure to hazardous process or as the case may be, the medical records shall be supplied to the worker, on receipt of an application from him. X-ray plates and other medical diagnostic reports may also be made available for reference to his medical practitioner.

79. Qualifications, etc., of Supervisors

(1) All persons who are required to supervise the handling of hazardous substances shall possess the following qualifications and experience:

(i) (a) A degree in Chemistry or Diploma in Chemical Engineering or Technology with five years experience; or

(b) A Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with two years experience.

The experience stipulated above shall be in process operation and maintenance in the Chemical Industry.

(ii) Chief Inspector-cum-Facilitator may require the supervisor to undergo training in Health and Safety.

(2) The syllabus and duration of the above training and the organisations conducting the training shall be approved by the Director-General. Factory Advice Service and Labour Institutes or the State Government in accordance with the guidelines issued by the Director-General; Factory Advice Service and Labour Institutes.

Rules prescribed under Section 88:

80. Permissible levels of certain chemical substances in work environment

Without prejudice to the requirements in any other provisions in the code & Rules, requirements specified in this schedule shall apply to all factories.

SCHEDULE

1. Definitions

For the purpose of this schedule

(a) " mg/m3" means milligrams of a substance per cubic meter of air ;

(b) "mppcm" means million particles of a substance per cubic meter of air ;

(c) "ppm" means parts of vapour or gas per million parts of air by volume at 250 C and 760 mm of mercury pressure;

(d) "Time weighted average concentration" means the average concentration of a substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at that location spread over the entire shift on an day, after giving weightage to the duration for which each such sample is collected and the concentration prevailing at the time of taking the sample.

Time weighted average concentration = [(C1T1+ C2T2+…. + CnTn)/1+T2+…Tn]

Where C1 represents the concentration of the substance for duration T1 (in hours);

C2 represents the concentration of the substance for duration T2 (in hours); and

Cn represents the concentration of the substance for duration Tn (in hours);

(e) " Work location " means a location in a factory at which a worker works or may be required to work at any time during any shift on any day.

2. Limits of concentrations of substance at work locations

(1) The time weighted average concentration of any substance listed in Table 1 or 2 of the schedule, at any work location in a factory during any shift on any day shall not exceed the limit of the permissible time weighted average concentration specified in respect of that substance:

Provided that in the case of a substance mentioned in Table 1 in respect of which a limit in terms of short term maximum concentration is indicated, the

concentration of such a substance may exceed the permissible limit of the time weighted average concentration for the substance for short periods not exceeding 15 minutes at a time, subject to the condition that

(a) such periods during which the concentration exceeds the prescribed time weighted average concentration are restricted to not more than 4 per shift;

(b) the time interval between any two such periods of higher exposure >hail not be less than 60 minutes ; and

(c) at no time the concentration of the substance in the air shall exceed the limit of short term maximum concentration.

(2) In the case of any substance given in Table 3, the concentration of the substance at any work location in a factory at any time during any day shall not exceed the limit of exposure for that substance specified in the Table.

(3) In the cases where the word "skin" has been indicated against certain substance mentioned in Tables 1 and 3, appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin, mucous membranes and eyes as the limits specified in these Tables are for conditions where the exposure is only through respiratory tract.

(4) (a) In case, the air at any work location contains a mixture of such substances mentioned in Tables 1, 2 or 3, which have similar toxic properties, the time weighted concentration of each of these substances during the shift should be such, that when these time weighted concentration divided by the respective permissible time weighted average concentration specified in the abovementioned tables, and the fractions obtained are added together, the total shall not exceed unity, i.e. C1 /L1+C3 /L3+ Cn /Ln should not exceed unity when

When CI, C2,….,Cn are the time weighted concentration of toxic substances 1,2 and in respectively, determined after measurement at work location;

and LI, L2 Ln are the permissible time weighted average concentration of the toxic substances 1, 2..... and in respectively.

(b) In case the air at any work location contains a mixture of substances mentioned in Table 1, 2 or 3, and these do not have similar toxic properties, then the time weighted concentration of each of these substances shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substance.

(c) The requirements in clauses (a) and (b) shall be in addition to the requirements in paragraphs 2 (1) and (2).

3. Sampling and evaluation procedures

(1) Notwithstanding provisions in any other paragraphs, the sampling and evaluation procedures to be adopted for checking compliance with the provisions in the schedule shall be as per standard procedures in vogue from time to time.

(2) Notwithstanding the provisions in paragraph 5, the following conditions regarding the

sampling and evaluation procedure to be adopted checking compliance with the provision in this schedule are specified.

(a) For determination of the number of particles per cubic meter in item 1 (a) (i) (1) in Table 2, samples are to be collected by standard or midget impringer and the counts made by light field technique.

(b) The percentage of quartz in the 3 formulae given in item 1 (A) (i) of Table 2 is to be determined from airborne samples.

(c) For determination of number of fibers as specified in item 2(A) of Table 2, the membrance filter method at 430 x magnification (4 mm objective) with phase contrast illumination should be used.

(d) Both for determination of concentration and percentage of quartz for use of the formula given in item 1 (a) (i) (2) of Table 2, the fraction passing through a size selector with the following characteristics should only be considered.

Aerodynamic diameter (Unity density sphere)	Percentage allowed by size-selector
2.0	20
2.5	75
3.5	50
5.0	25
10.0	0

4. Power to require assessment of concentration of substances

(1) An Inspector-cum-Facilitator may, by an order in writing, direct the occupier of a factory to get before any specified date the assessment of the time weighted average concentration at any work location of any of the substances mentioned in tables 1, 2 or 3 carried out.

(2) The results of such assessment as well as the method followed for air sampling and analysis for such assessment shad be sent to the Inspector-cum-Facilitator within three days from the date of completion of such assessment and also a record of the same kept readily available for inspection by an Inspector-cum-Facilitator

5. Exemption

If in respect of any factory or a part of a factory, the Chief Inspector-cum-Facilitator is satisfied: that, by virtue of the pattern of working time of the workers at different work locations or on account of other circumstances, no worker is exposed, in the air at the work locations, to a substance or substances specified in Tables I, 2 or 3 to such an extent as is likely to be injurious to his health, he (the Chief Inspector-cum-Facilitator) may by an order in writing, exempt the factory or a part of the factory from the requirements in paragraph 2, subject to such conditions, if any, as he may specify therein.

TABLE- 1

Sl. No	Substances	Permissible limits of exposure	
		Time weighted average concentration (TWA) (8 hrs)	Short term maximum concentration (STEL) 15 min).*

		ppm	Mg/m3**	ppm	Mg/m3**
(1)	(2)	(3)	(4)	(5)	(6)
1	Acetaldehyde	100	180	150	270
2	Acetic acid	10	25	15	37
3	Acetone	750	1,780	1,000	2,375
4	Acrolein	0.1	0.25	0.3	0.8
5	Acrylonitrile-skin (S.C)	2	4.5	-	-
6	Aldrin-skin	-	0.25	-	-
7	Allyl Chloride	1	3	2	6
8	Ammonia	25	18	35	27
9	Anilline-skin	2	10	-	-
10	Anisidine(o,p-isomers)-Skin	0.1	0.5	-	-
11	Arsenic & soluble compounds (as As)	-	0.2	-	-
12	Benzene (HC)	0.5	1.5	25	7.5
13	Beryllium & compounds (as Be) (S.C.)	-	0.002	-	-
14	Boron trifluoride-C	1	3	-	-
15	Bromine	0.1	0.7	0.3	2
16	Butane	800	1,900	-	-
17	2-Butanone (Methyl ethyl Ketone-MEK)	200	590	300	885
18	n-Butyl acetate	150	710	200	950
19	n-Butylalcohol-Skin-C	50	150	-	-
20	Sec/Tert Butyl acetate	200	950	-	-
21	Butyl mercaptan	0.5	1.5	-	-
22	Cadmium Dusts and salts (as Cd)	-	0.05	-	-
23	Calcium Oxide	-	2	-	-
24	Carbaryl (Sevin)	-	5	-	-
25	Carbofuran (Furadan)	-	0.1	-	-
26	Carbon disulphide-Skin	10	30	-	-
27	Carbon Monoxide	50	55	400	440
28	Carbon tetrachloride-Skin(S.C)	5	30	-	-
29	Chlordane-Skin	-	0.5	-	2
30	Chlorine	1	3	3	9
31	Chlorobenzene (Mono chlorobenzene)	75	350	-	-

32	Chloroform (S.C)	10	50	-	-
33	Bis (Chlororomethyl) ether (H.C.)	0.001	0.005	-	-
34	Chromic acid and chromates (as Cr)	-	0.05	-	-
35	Chromous salts (as Cr)	-	0.5	-	-
36	Copper Fume	-	0.2	-	-
37	Cotton dust, raw	-	0.2+	-	-
38	Cresol, all isomers-Skin	5	22	-	-
39	Cyanides (as CN)-Skin	-	5	-	-
40	Cyanogen	10	10	-	-
41	DDT (Dichlorodiphenyl trichloroethane)	-	1	-	-
42	Demeton Skin	0.01	0.1	-	-
43	Diazinon Skin	-	0.1	-	-
44	Dibutyl phthalate	-	5	-	-
45	Dichlorvos (DDVP)-Skin	0.1	1	-	-
46	Dieldrin-Skin	-	0.25	-	-
47	Dinitrobenezene (all isomers)-Skin	0.15	1	-	-
48	Dinitrotoluene-Skin	-	1.5	-	-
49	Diphenyl (Biphenyl)	0.2	1.5	-	-
50	Endosulfan (Thipdan)-Skin	-	0.1	-	-
51	Endrin-Skin	-	0.1	-	-
52	Ethyl acetate	400	1,400	-	-
53	Ethyl alcohol	1,000	1,900	-	-
54	Ethylamine	10	18	-	-
55	Flurorides (as F)	-	2.5	-	-
56	Fluorine	1	2	2	4
57	Formaldehyde (S.C)	1.0	1.5	2	3
58	Formic acid	5	9	-	-
59	Gasoline	300	900	500	1,500
60	Hydrazine-Skin(S.C)	0.1	0.1	-	-
61	Hydrogen Chloride-C	5	7	-	-
62	Hydrogen cyanide Skin C	10	10	-	-
63	Hydrogen Fluoride (as F)-C	3	2.5	-	-

64	Hydrogen peroxide	1	1.5	-	-
65	Hydrogen sulphide	10	14	15	21
66	Iodine C	0.1	1	-	-
67	Iron Oxide Fume (Fe2O3) (as Fe)	-	5	-	-
68	Isoamyl acetate	100	525	-	-
69	Isomyl alchohol	100	360	125	450
70	Isobutyl alcohol	50	150	-	-
71	Lead, inorg dusts and fumes (asPb)	-	0.15	-	-
72	Lindane-Skin	-	0.5	-	-
73	Malathion -Skin	-	10	-	-
74	Manganese (as Mn) dust and compounds-C	-	5	-	-
75	Manganese fume (as Mn)	-	1	-	3
76	Mercury (as Hg)-Skin				
(i)Alkyl compounds		-	0.01	-	0.03
(ii)All forms except alkyl vapour		-	0.05	-	-
(iii)Aryl and inorganic compounds		-	0.1	-	-
77	Methyl alcohol (Methanol)-Skin	200	260	350	310
78	Methyl cellosolve (2-Methoxy ethanol)-Skin	5	16	-	-
79	Methyl isobutyl ketone	50	205	75	300
80	Methyl isocyanate-Skin	0.02	0.05	-	-
81	Nephthalene	10	50	15	75
82	Nickel carbonyl (as Ni)	0.05	0.35	-	-
83	Nitric acid	2	5	5	10
84	Nitric oxide	25	30	-	-
85	Nitrobenzene-Skin	1	5	-	-
86	Nitrogen dioxide	3	6	5	10
87	Oil mist mineral	-	5	-	10
88	Ozone	0.1	0.2	0.3	0.6
89	Parathion skin	-	0.1	-	-
90	Phenol-skin	5	19	-	-
91	Phorate (Thimet)-Skin	-	0.05	-	0.2

92	Phosgene (Carbonyl chloride)	0.1	0.05	-	0.2
93	Phosphine	0.3	0.4	1	1
94	Phosphoric acid	-	1	-	3
95	Phosphorous (yellow)	-	0.1	-	-
96	Phosphorous Pentechloride	0.1	1	-	-
97	Phosphorous trichloride	0.2	1.5	0.5	3
98	Picric acid – Skin	-	0.1	-	0.3
99	Phridine	5	15	-	-
100	Silane (Silicon tetrahydride)	5	7	-	-
101	Sodium hydroxide-C	-	2	-	-
102	Styrene, monomer (phenylethlene)	50	215	100	425
103	Sulphur dioxide	2	5	5	10
104	Sulphur hexafluoride	1,000	6,000	-	-
105	Sulphuric acid	-	1	-	-
106	Tetraethyl lead (as Po)-Skin	-	0.1	-	-
107	Toluene (Toluol)	100	375	150	560
108	O-Toludine-Skin (S.C)	2	9	-	-
109	Tributyl Phosphate	0.2	2.5	-	-
110	Trichloroethylene	50	270	200	1080
111	Uranium, natural (as U)	-	0.2	-	0.6
112	Vinyl chloride (H.C)	5	10	-	-
113	Welding fumes	-	5	-	-
114	Xylene (o-, m-, p-isomers)	100	435	150	655
115	Zinc Oxide				
	(i) Fume	-	5.0	-	10
	(ii) Dust (Total dust)	-	10.00	-	-
116	Zicronium compounds (as Zr)	-	5	-	10

ppm : Parts of vapour or gas per million parts of contaminated air by volume at 250C and 760 (mm of mercury)

mg/m3 : milligram of substance per cubic meter of air

* : Not more than 4 times a day with at least 60 min. interval between successive exposure

** : mg/m3= (Molecular weight X ppm)/24.45

Lint : free dust as measured by the vertical elutriator cotton-dust sampler

C : denotes ceiling limit
skin : denotes potential contribution to the overall exposure by the cuteous route including mucous membrane and eye
S.C : denotes suspected human carcinogens
H.C : denotes confirmed human carcinogens

TABLE- 2

Substance	Permissible time weighed average concentration
(1)	(2)
Silica, Si O2	
(a) Crystalline	
(i) Quartz	
(1) In terms of dust count	(10600)/(%Quartz+10) mppcm
(2) In terms of respirable dust	10/(% respirable Quartz+2) mg/m3
(3) In terms of total dust	30/(% Quarts+3) mg/m3
(ii) Cristobalite	Half the limits given against quartz
(iii) Tridymite	Half the limits given against quartz
(iv) Silica, fused	Same limits as for quartz
(v) Tripoli	Same limit as in formula in item (2) given against quartz. 10 mg/m3, total dust
(b) Amorphous	
Silicates having less than 1% free Silica by weight	
Asbestos fiber larger than microns (i)Amosite (ii) Chrystolite (iii)Crocidolite (iv)Other Form	 0.5 fiber/cc*** 1.0 fiber/cc *** 0.2 fiber/cc *** 2 fibers/cc
Mica	705 mpum.
Mineral Gool Fiber	10 mg / cu. m.
Perlite	1060 mpp cm
Portland Cement	1060 mpp cm
Soap Stone	705 mpp cm
Table (Conabosti form)	705 mppcm
Talc(Fibrous)	Same limit as for asbestos
Tromolit	Same limit as for asbestos
Coal Dust	
1 For airborne dust having less than 5% silicon dioxide by weight	5 mg / cu. m.
2. For airborne dust having more than 5% silicon dioxide	Same limits as prescribed by

	formula in item (2) against quartz

Table- 3

Substance	**Permissible limit of exposure**	
(1)	**(2)**	
	pum	**mg / sq. m**
Acetic anhydride	5	20
O- Dichlorobenzene	50	300
Formaldehyde	2	7
Hydrogen Chloride	5	7
Manganese & Compounds (as Mn)	--	5
Nitrogen Dioxide	--	9
Nitroglycerin-skin	0.2	2
Potassium hydroxide	--	2
Sodium hydroxide	--	2
2,4,6-Trinitrotaluence (TNT)	--	0.5

*** (i) For fibre greater than 5µm in length and less than 5µm in breadth with length to breath ratio equal to or greater than 3:1

(ii) As determined by the membrane filter method at 400-450 x magnification (4mm objective) phase contrast illumination.

Portland cement 10mg/$m^{3,}$ Total dust containing less than 1% quartz.

Coal dust 2mg/m^3 respirable dust fraction containing less than 5% quartz.

Mppcm = Million particles per cubic metre of air, based on impinge samples by light-field techniques.

* As determined by the membrane filter method at 400-450 x magnification (4mm objective) phase

Rules prescribed under Section 90:

81. Procedure in appeals

An appeal presented under section 90 shall lie to the Chief Inspector-cum-Facilitator, or in cases where the order appealed against is an order passed by the Chief Inspector-cum-Facilitator, to the State Government and shall be in the form of memorandum setting forth concisely the grounds of objection to the order and bearing court fee stamp in accordance with Article 11 of Schedule II to the Court-fees Act, 1870, and shall be accompanied by a copy of the order appealed against certified correct and attested by the Inspector-cum-Facilitator concerned and duly stamped under the same Code.

CHAPTER -XIII

PLANTATION

Housing facilities for plantation workers under sub-section (1) (a) of section 92

82. **Housing accommodation for plantation workers**-

Every employer shall provide for every worker and his family residing in a plantation, housing accommodation as near as possible to the place of work. It shall be open to an employer to provide such accommodation in the course of several years provided that houses shall be built for atleast eight percent of the resident workers every year.

83. **Standard and specification of housing accommodation**–

All housing accommodation for workers in a plantation shall conform to such standards and specifications as may be approved by the State Government on the recommendation of the Plantation Advisory Committee constituted as per sub section 3 of section 17 of this Code.

84. **Sites for housing accommodation –**

(i) The housing accommodation shall be provided on dry well drained land which, consistent with the requirement regarding distance from the plantation, has supplies of wholesome drinking water within a reasonable distance. In malarial tracts, the house shall be provided at a safe distance from the swamps and marshes and above the highest flood level.

(ii) Adequate electric lighting shall be provided by the employer in the houses provided for the workers and also in and around the area in which housing accommodation is provided.

(iii) The employer shall maintain in good condition the approach roads and parts to the area where houses are located as also the sewers and drains in that area.

(iv) The employer shall not deny the public free access to those parts of the plantation where the workers are housed.

(v) The employer shall cause the vicinity of all houses to be kept clear of refuse and excreta and the latrines and drains to be cleaned out daily and all refuse in or near them to be collected, removed and disposed of hygienically.

85. **Housing Scheme –**

Within three months from the date of intimation by Government of their approval of the **Plantation Advisory Committee's** recommendations in the matter, every employer shall submit to the chief Inspector-cum-Facilitator of plantations for approval a scheme in regard to the provision by him of housing accommodation for workers. The Scheme shall provide for the following matters:-

(i) Specification of the period during which housing accommodation is proposed to be provided in respect of all resident workers in a plantation, such period being not later than the period referred to in rule 104.

(ii) The type design which is proposed to be adopted for the construction of houses, such design being in conformity with the standards and specification as may be approved by the State Government under rule 104.

(iii) Plans and site plans of the buildings to be constructed in accordance with the provisions of rule 104 or remodelled for use as worker's houses.

86. **Construction of houses in accordance with scheme and submission of annual return progress report in relation thereto -**

All houses shall be built in accordance with the scheme approved in writing by the Chief Inspector-cum-Facilitator of Plantations. Every employer shall submit annual return prescribed, to Inspector-cum-Facilitator of Plantations having jurisdiction over the area and also to the Chief inspector-cm-facilitator of Plantations.

87. Maintenance of houses –

(i) The employer shall, at his own expense, execute such repairs to the houses as may be required from time to time and maintain the houses in fit and safe condition for occupation.

(ii) A worker occupying a house may, and Inspector-cum-Facilitator appointed under this Code shall bring to the notice of the employer any defects in the condition of a house which make it dangerous to the health and safety of the worker. Where an Inspector-cum-Facilitator so brings any such defects to notice, it shall be the duty of the employer to rectify them with the least possible delay.

(iii) The employer shall get all the houses lime-washed at least once every year and all the doors, windows and other wooden structure varnished or painted once in three years.

88. Accommodation to be rent free–

No rent shall be charged by an employer for the housing accommodation provided to workers and their families residing in his plantation.

89**. Occupation of Houses –**

(i) Houses shall be allotted on the basis of one house for a worker and his family:

Provided that if there are two or more workers in a family, only one house shall be allotted in respect of any such family in the name of any worker in the family:

Provided further that in the case of termination of services of a worker, in whose name a house is allotted under the preceding proviso, the said house or any other standard house shall be re allotted in the name of any other member of his family, who is a worker:

Provided also, that it shall be open to the employer to allot houses to workers not having families at the rate of one house for not more than four such workers.

(ii) The occupant of a house shall not make any unauthorised additions to or alterations in the house.

(iii) The occupant shall not exchange the house with the occupant of another house except with the written permission of the employer.

(iv) The occupant shall not let the house or any portion thereof to any person.

(v) All workers and members of their families occupying the houses shall use the latrines provided and shall not pollute the soil and shall keep the houses and the precincts thereof clean and tidy and shall not waste drinking water.

(vi) No cattle or goats shall be kept in the living rooms or verandahs and no windows or air spaces shall be blocked up.

(vii) The employer shall bring to the notice of each worker to whom housing accommodation has been provided, the conditions governing the occupation of such accommodation, in writing, in a language which the latter can understand.

90. Occupation of accommodation after termination of employment –

(1) When a worker dies in the service of the employer, or retires or goes on transfer, or resigns, or goes on leave or when his services are terminated he or his family may retain the house up to the period as detailed below:-

(i) in the case of death, a period not exceeding three months, and in the case of transfer or termination of service, a period not exceeding two months ;

(ii) in the case of retirement or resignation, a period not exceeding one month ;

(iii) in the case of leave, for the period of leave ; and

(iv) in the case where discharge or dismissal of a worker results in an industrial dispute, for so long as the same is not finally disposed of.

(2) If the employer makes an application to the Industrial Tribunal having jurisdiction over the area and if the Industrial Tribunal is satisfied that a worker or any member of his family refuses to vacate the house allotted to such workers, after the expiry of the period specified in sub-rule (1) , the Industrial Tribunal may, notwithstanding anything contained in any other law for the time being in force, by notice served –

(a) by post, or any form of electronic mode

(b) by affixing a copy of it on the outer door or some other conspicuous part of such house, or require such worker or a member of his family or any other person who may be in occupation of the whole or any part of the house to vacate in within one

month of the date of service of such notice.

(3) In the event of the failure of the worker or a member of the family or any other person who is in occupation of the house to comply with the notice under sub-rule (2) the Industrial Tribunal may, by order, evict such worker, member of the family or other person and take possession of the house and may, for that purpose, use such force as may be necessary.

Provided that before taking such possession, a copy of the order of eviction shall be served on the worker or a member of the family or other any other person in occupation of the said house.

91. Facilities for harvesting standing crops on termination of employment:-

In the case of termination of his employment, a worker shall where possible, be given facilities to harvest the standing crops in his garden plot.

92. Drinking water:-

An adequate supply of wholesome drinking water shall be made available in every plantation at worksites or at a place or places to be approved by the Inspector-cum-Facilitator at all times, during working hours.

93. Source of supply:-

The water provided for drinking shall be supplied:-

(a) from the taps connected with a public water supply system, or

(b) from any other source approved by the Chief Inspector-cum-Facilitator of Plantations.

94. Storage of water:-

If drinking water is not supplied from taps connected with a public water supply system, it shall be kept in suitable vessels and renewed atleast daily. All practicable steps shall be taken to preserve the water and vessels from contamination and keep the vessels scrupulously clean.

95. Cleanliness of well or reservoir:-

(1) Drinking water shall not be supplied from any open well or reservoir unless it is so constructed, situated protected and maintained as to be free from the possibility of pollution by chemical or bacterial and extraneous impurities.

(2) Where drinking water is supplied from such well or reservoir, the water in it shall be sterilized periodically as required by the Inspector-cum-Facilitator by written order and the date on which sterilizing is carried out shall be recorded:

Provided that this requirement shall not apply to any such well or reservoir if the water therein is filtered and treated before it is supplied for consumption.

96. Report from the Medical practitioner:-

The Inspector-cum-Facilitator may, by an order in writing, direct the employer to obtain at such time or at such intervals, (i.e., once in six months) as he may direct, a report

either from the qualified medical practitioner or from the Andhra Pradesh Water supply and Drainage Board Testing Laboratories or any other laboratory approved by Government of Andhra Pradesh for this purpose, as to the fitness for human consumption of the water supplied to workers, and in every case to submit to the Inspector-cum-Facilitator a copy of such report as soon as it is received.

97. Toilet facilities –

a. Toilet facilities shall be provided in every plantation on the scale of one toilet for every fifty hectares of the area under cultivation or part thereof in addition to the toilet provided to the houses of workers.

Provided that there shall be atleast one toilet for all genders.

b. The toilet shall be conveniently situated and shall have exclusive access for all genders.

98. Toilets to conform to public health requirements:-

The toilet should conform to public health requirements and toilets other than those connected with an efficient water-borne sewage system, shall comply with the requirements of the Public Health authorities.

(i) **Privacy of Toilets:-** Every toilet shall be under cover and so partitioned off as to secure privacy and

shall have a proper door and fastenings.

(ii) **Sign Boards to be displayed:-** Where workers of both sexes are employed, there **shall** be displayed outside each toilet each toilet or toilet block, a notice in the language understood by the majority of workers "For men only" or "For Women only", as the case may be. The notice shall also bear the figure of a man or of a woman as the case may be.

(iii) **Water taps in toilet:-**

a. Where piped water supply is available, a sufficient number of water taps, conveniently accessible, shall be provided in or near such toilet accommodation.

b. If piped water-supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the toilet.

99. Urinal Facilities:-

Urinal facility shall be provided on the scale of one urinal for every twenty hectares of the area under cultivation or part thereof. The urinals shall be conveniently situated for all genders.

100. Urinals to conform to public health requirements:-

Urinals should conform to public health requirements. Urinals other than those connected with an efficient water-borne sewage system shall comply with the requirements of the Public Health authorities.

101. Construction and maintenance of drains:-

All drains carrying waste of sullage water shall be constructed in masonry or other impermeable materials and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line:

Provided that, where there is no such drainage line, the effluent shall be deodorized and rendered innocuous and then disposed of in a suitable manner to the satisfaction of the Health Officer.

Creche facilities under sub-section (1) (b) of Section 92

102. Creches –

(1) In every plantation wherein fifty or more workers (including workers employed by any contractor) are employed or were employed on any day of the preceding twelve months, the employer shall provide and maintain a crèche or creches for the use of their children who are below the age of six years according to the standards laid down in these rules.

(2) Every crèche shall be conveniently accessible to the mothers of the children accommodated therein.

(3) There shall be not less than 1.5 square metres of the floor area for each child to be accommodated in a crèche.

(4) The building in which the crèche is situated shall be of sound construction with a good plinth.

(5) The plan of the crèche building shall be in accordance with the standard plan or plans laid down by the Chief Inspector-cum-Facilitator.

Provided that where no standard plan has been laid down or where it is proposed to deviate from a standard plan, the Chief Inspector-cum-Facilitator's approval shall be obtained.

(6) The crèche shall be furnished with suitable furniture and a cradle for each child below the age of two and provided with playing materials such as sliding chutes, see-saws, dummy horses, toys etc.

(7) A Suitable fenced and shady open air playground shall be provided for the older children.

(8) The employer shall appoint (i) a woman trained in the care of children and infants as crèche-in-charge to look after children during the absence of their mothers, and (ii) other staff on scale approved by the State Government.

103. Wash room:-

(1) There shall be in or adjoining crèche a suitable wash room for the washing of the children and their clothes.

(2) There shall be provided a toilet for the use of the children in the crèche.

104. Supply of milk and refreshment:-

At least 300 ml of clean pure milk if possible, otherwise, powdered milk approved by the Medical Officer shall be made available for each child on every day it is accommodated in the crèche and the mother of such child shall be allowed in the course of her daily work, two intervals of sufficient time to visit the crèche and feed the child. For children above two years of age, there shall be provided in addition an adequate supply of wholesome refreshment.

105. Supply of clothes, soaps and oils:-

(1) The creche staff shall be provided with suitable clean clothes for use while on duty in the crèche.

(2) (a) Two (2) sets of clothing once a year shall be made available for each child while it is in the crèche. The clothing for boys will consist of a shirt and a half-trouser and for girls a blouse and a skirt or a frock or gown. Measurement should be taken and the clothing must be stitched accordingly to suit every child in the crèche. The cost of the cloth and stitching thereof including washing charges for washing the clothes once in a week shall be borne by the employer.

(b) One cake of soap weighing 100 gms. and 100 ml. oil shall be made available for the use of each child per month while it is in the crèche.

Provided that:-

(i) an establishment may avail common crèche facility of the Central, State Government, Municipality, Town Panchayath, Village Panchayath or private entity or provided by Non-Governmental Organisation or by any other organisation; or

(ii) a group of establishments may agree to pool their resources for establishing a common crèche.

Education facility for children under sub-section (1)(c) of section 92

106. Educational facilities for worker's children:

Every employer shall, if the number of workers' children between the ages of 6 and 12, in his plantation exceeds 25, provide and maintain a primary school or schools for imparting primary education to the children:

Provided that an employer may not provide and maintain a primary school if there is one under the direct management of the State Government or of any local body for imparting free education to the children up to the primary or higher standard, with enough seats to admit the children between the ages of six and twelve of the workers in his plantation and within a distance of 1.6 kilometres from the place where workers reside in his plantation; or if under any other law, he is required to pay a cess or tax for primary education:

Provided further that subject to the provisions of sub-rule(1) of rule 129, a group of employers may jointly provide and maintain a primary school and share its expenses.

107.

(1) Every school to be provided and maintained under rule 128 shall be conveniently situated and within a distance of 1.6 kilometres from the workers' quarters.

(2) The school building shall be constructed in accordance with the standard plan or plans which may be laid down by the State Government.

Provided that where there is no standard plan or where it is proposed to deviate from a standard plan, the State Government's approval of the plan of the school building shall be obtained

(3) Where adequate space is available, an open air playground with suitable accessories shall also be provided for the children attending the school

108. The employer or employers, as the case may be, shall provide for every primary school maintained under rule 128 such educational and other equipment as may be considered necessary by the State Government.

109.

(1) The employer or employers concerned shall appoint one teacher for every forty children attending the primary school.

(2) The teacher shall possess the qualifications prescribed by the State Government for teachers in Government primary schools.

Provided that in the case of any person who is working as a school teacher in a plantation at the commencement of these rules the State Government may, subject to such conditions as it may specify, relax any of the qualifications.

(3) The curriculum, duration, standard and syllabus of the course of instruction to be imparted in the primary school shall be such as may be approved by the State Government.

(4) No fees shall be charged from the worker's children attending the primary school.

110. Medical facilities under sub-section (1) (d) of section 91.

Health facilities to every worker employed in the plantation (including his family) or provide coverage under the Employees State Insurance Scheme of Social Security Code.

If health facilities not provided under Employees State Insurance Scheme of Social Security Code the following health facilities shall be provided.

111. Type of Hospitals –

There shall be two types of hospitals in plantations namely, garden hospitals and group hospitals.

(1) Garden hospitals will deal with out-patients, in-patience not requiring any elaborate diagnosis and treatment, infectious cases midwifery, simple pre-natal and postnatal care, care of infants and children and periodical inspection of workers.

(2) Group hospitals shall be capable of dealing efficiently, with all types of cases normally encountered but will not be used for routine treatment. Admission to group hospitals except in emergency shall be only on the recommendation of a garden hospital doctor.

112. Garden hospitals –

(1) Every employer of plantations specified in column(1) of the Table below shall provide the medical facilities specified in the corresponding entries in column (2) thereof.

THE TABLE

Sl.No	Class of plantations	Nature of medical facilities to be provided
(1)	**(2)**	**(3)**
1	Plantations which employ 1,000 or more workers	Own garden hospital.
2	Plantations employing more than 200 workers but less than 1,000 workers	Combined garden hospital and own dispensary
3	Plantations employing 200 or less workers.	Dispensary either individually or in groups with necessary equipment and arrangements for visiting doctors (The employers shall ensure that the doctor visits the dispensary at least thrice a week)

(1) Each garden hospital shall be under a qualified Medical Practitioner as assisted by at least one trained nurse, one trained maternity assistant, a qualified pharmacist, one man and one woman Nursing Orderly, one scavenger and one sweeper. The services of the staff shall be readily available during all hours:

Provided that in the case of doctors, nurses, maternity assistants and pharmacists employed in plantation at the commencement of these rules, the Chief Inspector-cum-Facilitators of plantations may in consultation with the Director of Medical Services grant exemption from possessing the qualifications prescribed for them.

(2) Medical and auxiliary personnel shall be appointed according to the following scale:-

(i) one qualified medical practitioner for every 1750 workers or part thereof.

(ii) nurse/number of workers not less than 1/1750

(iii) maternity assistants/number of workers not less than 1/1750

(iv) pharmacist / number of workers not less than 1/1750

(v) men nursing orderly /number of workers not less than 1/1750

(vi) women nursing orderly /number of workers not less than 1/1750

(vii) scavenger /number of workers not less than 1/1750

(viii) sweeper /number of workers not less than 1/1750

Provided that where the number of workers does not exceed 2000, no additional practitioner need to be appointed.

Provided further that where the number of women workers employed in any plantation is not less than 750, a woman medical practitioner also shall be appointed.

(3) (a) A minimum of 15 beds shall be provided in every garden hospital per 1,000 workers served and each bed shall be allowed at least six square metres of floor space.

(b) Every hospital shall be of sound permanent construction with impermeable washable wallsto a height of at least 1.5 metres on the inside with proper water supply and efficient sanitary arrangements.

(c) Every hospital shall have pure piped water supply and the wards, consulting room, operation theatre and dispensary shall each have a water point over a suitable glazed sink.

(d) The following departments shall be provided:-

(i) general ward for male
(ii) general ward for female
(iii) maternity with separate labour room,
(iv) family planning centre
(v) infectious ward with separate sanitary arrangements.
(vi) out-patient department (with sufficient waiting space for patients to wait under cover) preferably situated in a separate block form general wards.
(vii) consulting room so arranged that patients can be examined in privacy.
(viii) minor operation in dressing room
(ix) dispensary and drug store
(x) general store
(xi) kitchen for cooking

(e) In every hospital, transport facilities shall be provided for carrying patients to and from group hospitals.

113. Group hospitals –

(1) Group hospitals shall be established.

(2) Plans for the establishment of group hospitals containing details as regards their location and size, areas of plantations served, the number of workers employed thereon, etc., shall be approved by the State Government.

(3) Every group hospital shall have a minimum of 100 beds and there shall be at least three beds per 700 workers, every bed having 7.5 square metres of floor space.

Provided that the State Government may fix a lesser number of beds to be provided in a group hospital and exempt a group of plantation from providing a group hospital,

if it is satisfied that adequate alternative arrangements exist for treatment of patients intended to be treated at a group hospital:

Provided further that no exemption shall be allowed without the previous approval of the Central Government.

(4) The hospital shall be built according to such specifications as may be approved by the State Government.

(5) There shall be provision for piped supply of pure water, electricity, modern methods of sanitation and water flushed closets. Each ward, labour room, surgical dressing room, consulting room and dispensary, shall have a water point over a suitable glazed sink :

Provided that with the approval of the State Government suitable alternative arrangements may be made in regard to supply of pure water, electricity and other modern methods of sanitation:

(6) Each hospital shall have provision for:

(i) Operating theatre block,
(ii) X-ray block,
(iii) Physical treatment block,
(IV) Dental treatment block,
(V) Labour room,
(VI) T.B. and V.D.clinics,
(VII) Consulting and examination rooms
(VIII) Clinical Laboratory fully equipped,
(XI) Dispensary,
(X) Administrative and office block,
(XI) Kitchen and Laundry blocks,
(XII) Lavatories and bath-rooms,
(XIII) Stores,
(XIV) Mortuary and post-mortem room

Out-patient block which should preferably be at some little distance from the wards.

Separate wards shall be provided for male, female, maternity cases and small isolated wards for infectious diseases:

Provided that X-ray and physical Therapy blocks may not be provided if satisfactory arrangements are made by employers to provide these facilities with some hospital approved by the chief Inspector-cum-Facilitator.

(7) (a) Every group hospital shall have such medical and other staff as may be specified by the State Government. All doctors in a group hospital shall be qualified medical practitioners.

(b) There shall be 15 nurses for a 100 bedded hospital of whom one shall be senior trained, 5 junior trained and 9 assistant nurses. Such classification may be made according to their qualifications and experience.

(8) A properly equipped ambulance shall be maintained every group hospital.

114. Equipment and drugs –

(a) Every dispensary/garden hospital and group hospital shall maintain such equipment and drugs, etc., as may be specified by the State Government.

(b) The District Medical Officer concerned or (an Assistant surgeon nominated by District Medical Officer or a Medical Officer appointed by the Labour Department) shall visit the dispensaries, garden hospitals and group hospitals at least once a year to see whether they are sufficiently equipped and stocked with drugs, and send a report to the management and to the chief Inspector-cum-Facilitators of plantations.

115. Medical records –

The medical officer in charge of each dispensary, garden or group hospital shall

(a) such registers, books, accounts and a medical record in respect of every patient, as may be prescribed by the State Government for the purpose ; and

(b) comply with such regulations as may be made by the State Government in respect of medical stores.

116. Standard of medical facilities –

(a) Out-patients, treatment

It shall include

(i) detention for observation and treatment

(ii) preventive treatment such as vaccination and inoculation,

(iii) free provision of all drugs including those needed for injections and dressings and appliances that may be considered necessary,

(iv) ante-natal and post-natal advice,

(v) provision of certificates, free of cost in respect of maternity and sickness benefit claims.

(b) In patients' Treatment –

(i) The hospital treatment shall include maintenance, food and medicines including treatment at confinement as may be available at the hospital and the said facilities shall subject to the provisions of clause (ii) be free of cost to workers and shall be paid for by the plantations.

(ii) notwithstanding anything contained in clause (i), workers and their families admitted as in-patients in the hospital shall be entitled to the supply of free diet, only where any award, agreement of contract of service provides for the supply of free diet or where they were already enjoying the benefit of free diet under any custom usage and past practice and such supply shall be in accordance with the terms of the said award, agreement, contract, custom, usage and last practice, but where there is no such award, agreement, contract, custom, usage

and past practice the diet charges shall be paid for by the workers at such rate as the State Government may, from time to time, fix.

(iii) workers and members of their families undergoing treatment as in-patients in the Garden or Group hospitals in plantations shall be required during their period of stay in the hospitals to wear only the uniforms supplied by the Garden or Group hospitals free of cost.

117. Failure to provide and maintain medical facilities as required in these rules –

If any employer does not provide and maintain medical facilities as required in these rules to the satisfaction of the Chief Inspector-cum-Facilitator, State Government upon request by the Chief Inspector-cum-Facilitator will cause to be provided and maintained these facilities in the nearest garden hospital or dispensary or in a Primary Health Centre or other similar hospital or dispensary.

The defaulting employer shall be liable to pay the cost such medical facilities including charges, if any, in respect of –

(a) a medical officer's visit to the plantations for the purpose of attendance on any sick worker or workers and his or their families respectively;

(b) The maintenance of sick workers or a member of his family in a hospital/dispensary for each day's maintenance ; and

(c) Transport to and fro provided to the sick worker or a member of his family.

118. Recovery of sum due under rule 139 –

When any sum of money is due from any employer under rule 139, the Chief Inspector-cum-Facilitator shall give him notice in writing requiring the payment of the amount to the collector, who may recover the same as an arrear of land revenue

Recreation facilities under sub-section (1)(e) of section 92

119. Recreational Facilities:-

Every employer shall provide and maintain.

(i) a recreation centre or centres for workers with provision for indoor games suitable for adult workers and child ; and

(ii) where adequate flat open space is available within a reasonable distance, a playground or playgrounds for adult workers and child with necessary sports equipment for outdoor games:

Provided that subject to the provisions of rule 142 a group of employers may, with the approval of the Chief Inspector-cum-Facilitators, provide and maintain joint recreation centres and playgrounds and share their expenses.

120. Every recreation centre to be provided and maintained under rule 141 shall be conveniently situated as near as possible to the worker's quarters.

121. An employer of a plantation shall be responsible to provide and maintain welfare facilities for which the workers in the plantation are entitled under this Code either from his

own resources or through the schemes of the Central Government or State Government, Municipality or Panchayat for the locality in which the plantation is situated.

Safety under sub-section (2) of Section 93

122. Restriction on employment of women and adolescent worker in handling insecticides, chemicals and toxic substances:-

Women worker or adolescent worker shall be permitted to be engaged in handling or storage or transport of insecticides, chemicals and toxic substances by following the standard operating procedures as notified by the State Government.

123. Appointment and qualification of Supervisors:-

The use, handling, storage and transportation of insecticides, chemicals and toxic substances shall be supervised by a competent person who should possess the following qualifications:-

(i) He shall a graduate in Agriculture or in science or he shall possess a Certificate Course on handling of chemicals and toxic substances conducted by the United Planters' Association of Southern India (UPASI)

(ii) He should be given training from a designated Training Institute and

(iii) He should also possess valid certificate from St. Johns Ambulance institute for giving first aid treatment to workers.

124. Training:-

(1) The persons involved in handling insecticides, chemicals and toxic substances shall be arranged for suitable training in observing safety precautions and handling safety equipment provided to them in the institutes notified by the State Government from time to time.

(2) All the workers who apply, handle, transport or come into contact with agro-chemicals or other chemical substances must be trained in at least in the following subjects:-

(I) General occupational health;

(II) Formulations, names, and the bin code action of the substances used in the case of pesticides

(III) Correct use of personal protective clothing and equipment

(IV) Preventive measures and measures for reducing damage to health and the environment, caused by the chemical substances, equipment, techniques, signage, medical examination etc.,

(V) Emergency procedures, first aid and medical attention for cases involving poisoning or undue contact with chemical substances

(VI) Techniques for handling chemical substances and for the correct application of agro-chemicals;

(VII) Secure handling and transportation of agro-chemicals for drivers and

(VIII) Other necessary training suitable for the plantation

Safety under sub-section (5) of section 93

125. Medical examination to the workers:-

(1) Without prejudices to section 6 (c) of this code Rule 9 every worker who is engaged in the work of handling, dealing, or spraying or mixing insecticides, chemical and toxic substances shall be medically examined initially at the time of employment and thereafter once in year in Group Hospital or Garden or any other hospitals notified in this regard.

(2) The medical examination and tests shall be in **Form: V**

(3) Any person showing symptoms of poisoning shall be immediately examined and given proper treatment.

(4) Every employer shall maintain health record of every worker such as annual medical examination or any other examination when required, shall be kept in plantation and every such worker shall have access to such record.

Safety under sub-section (7)(a) and (b) of section 93

126. Washing, bathing, cloak room, protective clothing and equipment facilities :-

(1) Every employer shall provide washing bathing and cloak room facilities to the workmen, who are employed in handling insecticides, chemicals and toxic substances.

(2) Protective clothing and equipment :-

(a) persons handling insecticides, chemicals and toxic substances during its operation, distribution, mixing, spraying shall be adequately protected with appropriate clothing.

(b) The protective clothing shall be made of materials which prevent or resist the penetration of any form of insecticide, chemical and toxic formulations. The materials shall also be washable so that the toxic elements may be removed after each use.

(c) A complete suit of protective clothing shall consists of the following dresses, namely:-

(I) Protective outer garment with hat

(II) Rubber gloves or such other protective gloves extending of way upto the fore arm made of materials impermeable to liquids.

(III) Dust proof goggles

(IV) Boots

(V) Reusable cloth masks

Safety under sub-section (9) of section 93

127. Precautionary notices:-

Every employer in the plantations shall display the following precautionary notices at or near the place where the insecticides chemicals and toxic substances are handled:-

(I) Use protective clothing's like overalls, gloves, goggles, rubber gum-boots and wide-rimmed hats.

(II) Do not wear clothes contaminated with insecticides and pesticides

(III) Clean the protective clothing by washing with soap and water

(IV) Do not allow children, sick persons and pregnant women and nursing mothers to handle insecticides and pesticides

(V) Do not eat, drink, smoke or chew while handling insecticides and pesticides

(VI) Never blow out clogged nozzles with mouth

(VII) Do not use leaking sprayers. Avoid contamination of the skin, mouth and eyes

(VIII) Do not inhale the insecticides unattended in the fields

(IX) Never spray insecticides and pesticides against the wind.

(X) Do not leave insecticides and pesticides unattended in the fields

(XI) Do not allow humans and livestock to enter the insecticides and pesticides sprayed fields for a period of time, suggested by the manufacturers.

(XII) Do not wash insecticides and pesticides containers near a well or running stream

(XIII) Keep clean water, soaps and towels ready for use

(XIV) Wash hands and exposed skin thoroughly with soap and water before eating, drinking, smoking or, chewing and after work.

(XV) Keep the insecticides and pesticides locked in store room and out of reach of children and other unauthorized persons

(XVI) Do not enter sprayed field. Follow the re-entry periods for all insecticides and pesticides including herbicides, suggested by the manufactures

(XVII) Keep insecticides and pesticides in their original, labelled containers.

(XVIII) Do not decant insecticides and pesticides into unlabelled containers except for immediate use.

(XIX) Dispose the containers safely after thoroughly emptying and washing. They may be buried in a place away from water source.

(XX) Never reuse the container for any other purposes if it is impossible to remove the traces and pesticides from the containers.

Such other matters prescribed by State Government as per sub section (4) of section 93

128. Transport and storage of insecticides within the plantation –

(1) No insecticides, chemicals and toxic substances shall be transported or stored in such a way as o come into direct contact with food stuffs or animal feeds or drinking water.

(2) If any insecticides, chemicals and toxic substances are found to be leaked out in transport or storage, it shall be the responsibility of the employer to take such measures urgently to prevent poisoning and pollution of soil or water, if any.

(3) The packages containing insecticides, chemicals and toxic substances shall be stored in separate rooms or premises away from the rooms or premises used for storing such articles or shall be kept in separate almirahs under lock and key depending upon the quantify and nature of the insecticides.

(4) The rooms or premises meant for storing insecticides, chemical and toxic substances shall be well built, dry, well lit and ventilated with sufficient dimension.

129. List of insecticides, chemicals and toxic substances:-

Every employer shall display in plantations the list of insecticides, chemicals and toxic substances as notified by the State Government, from time to time under the insecticides Act, 1968.

CHAPTER- XIV

OFFENCES AND PENALTIES

130. Manner of compounding of offences by the authorized officer specified under sub-section (1) of section 114.-

(1) The officer notified by the State Government for the purposes of compounding of offences under sub-section (1) of section 114 shall issue electronically a compounding notice for the offences for which are compoundable under section sub-section (1) of section 114.

(2) The person so noticed may apply to the officer electronically and deposit the entire compounding amount by electronic transfer or otherwise, within fifteen days of the receipt of the notice.

(3) The Compounding Officer shall issue a composition certificate within ten days of receipt of the composition amount, to such person from whom such amount has been received in satisfaction of the composition notice.

(4) If a person so noticed fails to deposit the composition amount within the one month before the institution of prosecution, the prosecution shall be proceeded with before the competent Court.

(5) No prosecution shall be instituted without giving an opportunity to the employer to comply with such provisions subjected to proviso of sub-section (1) of Section 110 and compounding as under Section 114.

CHAPTER-XV

SPECIAL RULES APPLICABLE TO FACTORIES

Rules made under section 135(2)(za)

131. Safety of machinery and plant

(1) Wherever practicable and considered necessary by the Inspector-cum-facilitator, service platforms and gangways shall be provided for overhead moving parts or

other parts of plant and Machinery where periodical maintenance is required, these shall be securely fenced with guards, rails and toe boards etc as required by him.

(2) Safe access shall be provided to all appliances which are required to be handled or operated while the machinery is at work.

(3) All ladders used in attending overhead plant and machinery shall be specially made for that work and provided with hooks or an effective nonskid device.

(4) No transmission machinery in motion shall be cleaned with cotton waste, rags or similar materials held in hand.

(5) All belts shall be regularly examined to ensure that the belts are kept in proper tension.

(6) Each water gauge glass of a boiler shall be fitted with an efficient guard.

(7) All hot parts of plant and Machinery, if there is a risk of human contact during the course of any work or where there is a potential for combustible material dust accumulation and the exhaust pipes of engines, shall be adequately insulated or guarded.

132. (1) Buildings and Structures: No building, wall, chimney bridge, tunnel, road, gallery, stair-way, ramp, floor, platform, staging, or other structure, whether of a permanent or temporary character, shall be, constructed or situated, maintained in any factory in such manner as to cause risk of bodily injury.

(2) Machinery and Plant:- No machinery, plant or equipment shall be erected, situated, operated or maintained in any factory in such a manner as to cause risk of bodily injury.

(3) Methods of work:- No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.

(4) Stacking and storing of material etc.:- No material or equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.

133. Safety Belts

Where any person is required or allowed to work at a place from which he may be liable to fall through a distance of more than three meters, he shall be provided with a safety belt conforming to Indian Standards, with double lanyard wheneverrequired, the other end of which shall be securely tied or hooked to some suitable rigid fixture preferably above the shoulder height of the worker required to wear the safety belt. Where provision such fixture is not practicable, the suitable lifelines for hooking the lanyards of the safety belts in both horizontal and vertical movements of the worker as required for executing the work to be performed by him.

The safety belt so provided shall be tested and examined thoroughly by a competent person at least once in six months as per the Indian standards and a certificate with regard to its suitability obtained from the said competent person and entered in a register, which shall be produced before the Inspector on demand.

Provided that where Chief Inspector cum facilitator is satisfied that in respect of any particular work in a factory or any location thereof, wearing of safety belt is not convenient or is inappropriate or is not reasonably practicable and where alternate safety precautions have been taken and provided by the management for the safety of the workers, on the application of the manager of the factory he may, by order in writing, exempt the factory or any part thereof or description of work, from the requirement of providing safety belts under the rule subject to such conditions as he may specify.

134. Fragile roofs, provision of crawling Boards etc.

In any factory, no person shall be required to stand or pass over or work on or near, any roof or ceiling covered with fragile material through which he is liable to fall, in case it breaks or gives way, a distance of more than three meters, unless -

(a) suitable and sufficient ladders, duck ladders or crawling boards which shall be securely supported, are provided and used; and

(b) a permit to work on the fragile roof is issued to him each time he is required to work thereon by a responsible person of the factory concerned.

135. Cotton Ginning

1. The line shaft or second motion shall be completely enclosed by a continuous wall or unclimbable fencing with only so many openings as are necessary for access to the shaft for removing cotton seed, cleaning and oiling and such openings shall be provided with gates or doors which shall be kept closed and locked.

2. The feed-mouth of the opener shall be fitted with a traverser or a grid guard so as to render it impossible for the operatives to be within reach of the beaters when feeding on to the lattice; and discharge ends shall be guarded so as to prevent the operatives from inadvertently coming within reach of the beaters.

3. The spur gearing at the side of the opener shall be completely covered by a strong metal guard.

4. The crank shaft pulleys and roller pulleys of all gins shall be securely guarded by strong box guards hinged top covers.

5. The spur wheels, oscillating levers and rollers of gins shall be provided with guards.

6. All ginning machines and openers shall be provided with fast and loose pulleys and efficient belt shifters.

136. Wood working machinery

1. Definitions:- For the purposes of this schedule,-

(a) "Wood-working machine" means a circular saw, band saw planning machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork.

(b) "Circular saw" means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation.

(c) "Band saw" means a band saw, the cutting portion of which runs in vertical direction but does not include a log saw or band resawing machine.

(d) "Planning machine" means a machine for overhand planning or for thicknessing or for both operations.

2. Stopping and starting device:- An efficient stopping and starting device shall be provided on every wood working machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine.

3. Space around machines:- The space surrounding of every wood working machine in motion shall be kept free from obstruction.

4.Floors:-The floor surrounding every wood working machine shall be maintained in good and, level condition, and shall not be allowed to become slippery, and as far as practicable, shall be kept free from chips or other loose material.

5.Training and supervision:-

(1) No person shall be employed at a wood-working machine unless he has been sufficiently trained to work that class of a person who has a thorough knowledge of the working of the machine.

(2) A person who is being trained to work at a woodworking machine shall be fully and carefully instructed as to the dangers of the machine and the precautions to be observed to secure safe working of the machine.

6. Circular saws:- Every circular saw shall be fenced as follows:-

(a) Behind and in direct line with the saw there shall be a riving knife, which shall have a smooth surface shall be strong, rigid and easily adjustable, and shall also conform to the following conditions:-

(i) The edge of the knife nearer the saw shall form an area of a circle having a radius not exceeding of the largest saw used on the bench.

(ii) The knife shall be maintained as close as practicable to the saw, having regard to the nature of the work being done at the time, and at the level of the bench table the distance between the front edge of the knife and teeth of the saw shall not exceed half an inch.

(iii) For a saw of a diameter of less than 60 cms. the knife shall extend upwards from the bench table to within 25 mm of top of the saw, and for a saw of a diameter of 60 cms or over shall extend upwards from the bench table to a height of at least nine inches.

(b) The top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw.

(c) The part of the saw below the bench table shall be protected by two plates of metal or other suitable material one on each side of the saw; such plates shall not be more than 15 cm apart, and shall extend from the axis or the saw outwards to a distance of not less than 5 cm beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least 12.5 mm or, if beaded be of a thickness of at least 1.25 mm.

7. Push sticks:- A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.

8. Band saws:- Every band saw shall be guarded as follows:-

(a) Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material.

(b) the front of the top pulley shall be covered with sheet or expanded metal or other suitable material.

(c) All portions of the blade shall be enclosed or otherwise securely guarded except the portion of the blade between the bench table and the top guide.

9. Planning machines:-

(1) A planning machine (other than a planning machine which is mechanically fed) shall not be used for overhand planning unless it is fitted with a cylindrical cutter block.

(2) Every planning machine used for overhand planning shall be provided with a 'bridge', guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal direction.

(3) The feed roller of every planning machine used for thicknessing except the combined machine for overhand planning and thicknessing, shall be provided with an efficient guard.

10. Vertical spindle moulding machines:--

(1) The cutter of very vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.

(2) The wood being moulded at a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce, as far as possible, the risk of accident to the worker.

11. Chain mortising machines:-The chain of every chain mortising machines shall be provided with a guard which shall enclose the cutters as far as practicable.

12. Adjustment and maintenance of guards:- the guards and other appliance, required under this schedule shall be-

(a) maintained in an efficient state
(b) constantly kept in position while the machinery is in motion ; and
(c) so adjusted as to enable the work to be done without unnecessary risk.

13. Exemptions:- Paragraphs 6, 8, 9 and 10 shall not apply to any wood-working machine in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this schedule

137. Electricity Rules

These rules shall apply to all factories-

(1) Definitions:-

(a) "Authorised person" means a person over 21 years of age who may be either-

(i) the occupier or

(ii) contractor for the time being under contract with the occupier or

(iii) a person employed, appointed or selected by the occupier or by a contractor as aforesaid, to carry out certain duties incidental to the generation, transformation , conversion switching, controlling, regulating, distribution or use of electrical energy, such occupier , contractor or person being a person who is competent for the purposes of the rule in which the terms is used.

(b) "Apparatus " means electrical apparatus, and includes all apparatus,machines and fittings in which conductors are used or of which they form a part.

(c) "Bare" means not covered with insulating material.

(d) "Circuit " means an electrical circuit forming a system or branch of a system

(e)"Conductor" means an electrical conductor arranged to be electrically connected to a system.

(f) "Covered with insulating material" means' adequately covered with insulating materials of such quality and thickness that there is no danger.

(g) "Danger " means danger to health or danger to life or limb from shock,burn, or other injury to persons employed, or from fire attendant upon generation, transformation, distribution or use of electrical energy.

(h)"Dead" means at, or about, zero potential, and disconnected from any live system.

(i) "Earthed" means connected to the general mass of earth in such manner as will ensure at all

time an immediate discharge of electrical energy without danger.

(j) "Insulating Stand" means a floor, platform stand or mat.

(k) "Insulating Screen means a screen.

(1) "Insulating Books " means books.

(m) "Insulating Gloves" means gloves. (of such size, quality and construction according to the circumstances of the use thereof, that a person is thereby adequately protected from danger).

(n) "Live " means electrically charged.

(o) "Pressure" means the difference of electrical potential between any two conductors or between, a conductor and earth as read by a hot wire an electrostatic volta meter.

(p) "Low pressure " means a pressure in a system normally not exceeding 250 volts where the electrical energy is used.

(q) "Medium pressure " means a pressure in a system normally above 250 volts but not exceeding 650 volts where electrical energy is used.

(r) "High pressure" means a pressure in a system normally above 650 volts, but not exceeding3,000 volts, where the electrical energy is used or supplied.

(s) "Extra High pressure" means a pressure in a system normally exceeding 3,000 volts where the electrical energy is used or supplied.

(t) "Switch Board" means the collection of switches or fuses, conductors and other apparatus in connection therewith, used for the purpose of controllingthe current or pressure in any system or part of a system.

(u) "Switch Board Passage-way" means any passage way or compartment large enough for a person to enter, and used in connection with switch board when live.

(v) "System " means an electrical system in which all the conductors and apparatus are electrically connected to a common source of electro motive force.

(2) All apparatus and conductors shall be adequate in size and power for the work they are called upon to do and so constructed, installed, protected, worked and maintained as to prevent danger so far as reasonably practicable.

(3) Every electrical joint and connection shall be of proper construction as regards conductivity, insulation, mechanical strength and protection.

(4) Efficient means, suitably located, shall be provided for protecting from excess of current to every part of a system as may be necessary to prevent danger.

(5) All parts, of generators, motors, transformers, or other similar apparatus, within reach from any position in which any person employed may be required to be, shall be, so far as reasonably practicable, so protected as to prevent danger.

(6) All accessible metallic portions of electrical plant or apparatus which though normally not forming part of an electrical circuit, may become alive, accidentally, shall be protected by an insulating covering or by other adequate means or shall be connected to earth by a conductor of adequate size.

(7) Adequate working space and means of access, free from danger shall be provided for all apparatus which have to be worked or attended to by any person.

(8) Where one of the conductors of a system is connected to earth, no single pole switch other than a link for testing purposes, or switch for use in controlling a generator shall be placed in such conductor or any branch thereof.

(9) Every fuse and every automatic circuit-breaker used instead thereof shall be so constructed and arranged as effectively to interrupt the current before it so exceeds the working rate as to involve danger. It shall be of such construction or be so guarded or placed as to prevent danger from over heating, or from arcing or the scattering of hot metal or other substance which it comes into operation. Every fuse shall be either of such construction or so protected by a switch that the fusible metal may be readily renewed without danger.

(10) Conductors which in accordance with the conditions of operation are required to be earthed shall, as a general rule not be protected by fuses.

(11) The general arrangement of switch-boards shall, so far as reasonably practicable, be such that:-

(a) all parts which may have to be adjusted or handled are readily accessible
(b) the course of every conductor may, where necessary, be readily traced ;
(c) conductors arranged for connection to the same system are kept well apart, and can, where necessary, be readily distinguished;
(d) all bare conductors are so placed or protected as to prevent danger from accidental short circuit.

(12) Every switch board having bare conductors normally so exposed that they may be touched, shall, if not located in any area or areas set apart for the purposes thereof, where necessary be suitably fenced or enclosed.

No person except an authorised person, or a person acting under his immediate supervision, shall, for the purpose of carrying out his duties, have access to any part of an area so set apart.

(13) Every motor shall be provided with an efficient switch or circuit breaker for starting and stopping the motor, so placed as to be easily and safely operated by the person

controlling the motor. Such a switch or circuit breaker may be embodied in the starting controlling device used with the motor.

(14) In every place in which machines are being driven by an electric motor, there shall be means at hand for either switching off the motor, or stopping machines if necessary to prevent danger.

(15) Every flexible wire for portable apparatus shall be connected to the system either by efficient permanent joints or connections, or by a properly constructed connector.

In all cases where the person handling portable apparatus or pendent lamps with switches, would be liable to get a shock through a conducting floor or conducting work or otherwise, if the metal work of the portable apparatus became charged, the metal work must be efficiently earthed; and any flexible metallic covering of the conductors shall be itself efficiently earthed and shall not itself be the only earth connection or the metal of the apparatus.

A lamp holder shall not be in metallic connection with the guard or other metal work of a portable lamp.

In such places the portable apparatus and its flexible wire shall be controlled by efficient means suitably located, and capable of cutting of the pressure, and the metal work shall be efficiently earthed independently of any flexible metallic cover of the conductors and any such flexible covering shall itself be independently earthed.

(16) In plug and socket connection for transportable apparatus the socket shall be connected to the conductor and the plug to the appliance.

(17) Plug for connecting moveable conductors shall he of such construction that they do not get in the socket connections meant for higher current. Plug and socket connection shall be of such construction that the plug cannot be inserted or withdrawn while the current is on.

(18) Efficient means, suitably located, shall be provided for cutting off all pressure from every part of a system as may be necessary to prevent danger.

(19) All conductors shall either be covered with insulating material and further efficiently protected where necessary to prevent danger or they shall be so placed and safeguarded as to prevent danger so far as is reasonably practicable.

(20) Knife switches shall be of such construction that the breaking area cannot reach the operating handle and they shall be so connected that when open the blades are dead.

(21) All conductors and apparatus exposed to the weather wet corrosion, inflammable surroundings or explosive atmosphere, or used in any process or for any special purpose other than for lighting or power, shall be so constructed or protected, and such special precautions shall be taken as may be necessary to prevent danger in view of such exposure or use.

(22) In any place where inflammable substance or explosive dust or gas is liable to be present

(a) No lamp except incandescent lamp with its holder completely enclosed in a fitting having thick glass glove and an adequate radiating surface shall be used.

(b) All generators, motors, plants and their tunnels and every electrical fitting shall be of gas tight construction.

(c) The cables for their entire length shall be enclosed in the gas tight conduits.

(d) No portable apparatus shall be used unless such apparatus is approved by the Chief Inspector.

(e) Switches, cut outs and all other accessories liable to are shall where practicablebe located out side such places, but where this is impracticable they shall be of flame-proof type.

(23) Adequate precautions shall be taken to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon.

(24) Where necessary insulating stands or screens shall be provided adequately to prevent danger and kept permanently in position, and shall be maintained in sound condition.

(25) Portable insulating stands, screens, boots, or other suitable means shall be provided and used when necessary adequately to prevent danger, and shall be periodically examined by an authorised person. A record of such examinations shall be kept in suitable register which shall be readily available for perusal by an Inspector.

(26) No person except an authorised person or a competent person acting under his immediate supervision shall undertake any work where technical knowledge or experience is required in order adequately to avoid danger; and no person shall work alone in any case in which the Chief Inspector directs that he shall not. No person except an authorised person or a competent person over 21 years of age acting under his immediate supervision, shall undertake any repair, alteration, extension, cleaning or similar work where technical knowledge or experience is required in order to avoid danger, and no one shall do such work unaccompanied.

(27) When work is being carried on the power lines a notice board of a size not less than 1'-0" x 0'- 9" labelled in red "Caution, person working on line" and its equivalent in vernacular shall be placed on the switch board.

(28) Instructions, both in English and in the vernacular of the district as to the treatment of persons from electric shock, shall be affixed in all premises where electrical energy is generated, transformed, converted, switched, controlled, regulated, distributed or used.

(29) Exemptions:-

1. Nothing in this rule shall apply to any service lines or apparatus on the supply side of the consumer's terminal or to any chamber containing such service lines or apparatus where the supply is obtained from an outside authority.

   Provided always that no live metal is exposed so that it may be touched.
2. This rule shall not apply to any installation generating, transforming, converting or using electrical energy at a voltage of 24 volts or less.
3. The State Government may by order exempt from the operation of this rule either in whole or in part any premises to which any special rules or regulations under any other Act as to the generation, transformation, conversion, switching, controlling, distribution and use of electrical energy apply; and may revoke such order.
4. If the occupier can show, with regard to any requirement of this rule, that thespecial conditions in his premises are such as adequately to prevent danger, that requirement shall be deemed to be satisfied and the Chief Inspector may by order in writing direct, that any class of special condition defined in the requirements of this rule adequately to prevent danger are satisfied, and may revoke such order. In particular the following shall be deemed for all the purposes of this rule adequately to prevent danger- Room in which-
   a) the floor is of wood or otherwise insulated
   b) there is no machinery or other earthed metal with which a person handling any non-earthed lamp fittings or any portable lamp is liable to be in contact
   c) no process rendering the floor wet is carried on ; and
   d) no live conductor is normally exposed so that it may be touched.

138. Ship building and Ship-repairing

(1) Application:- These rules shall apply as respects of work carried out in any of the operations.

(2) Definitions:- In these rules unless there is anything repugnant in the subject or context

(a) "Certificate of entry" means a certificate which-

(i) is given by a person who is a competent analyst and who is competent to give such certificates ; and

(ii) certifies that he has in an adequate and suitable manner tested the atmosphere in the oil-tank or oil-tanks specified in the certificate and found that having regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere being or becoming dangerous, entry to the oil-tank or oil-tanks without wearing breathing apparatus may in his opinion, be permitted;

(b) "hot work" means any Work which involves-

(i) welding, burning, soldering, brazing, sand blasting or chipping by spark producing tools; or

(ii) use of non-flame proof electrical equipment or equipment with internal combustion engines;

and includes any other work which is likely to produce sufficient heat capable of igniting

flammable gases or vapours.

(c) "naked light certificate" means a certificate which -

(i) is given by a person who is a competent analyst and who is competent to give such certificates; and

(ii) certifies that he has in an adequate and suitable manner tested for the presence of inflammable vapour the oil-tank, compartment, space or other part of the vessel specified in the certificate and found it to be free therefrom and that having regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere becoming inflammable, the use of naked lights, fires, lamps or heated rivets or any hot work to be carried out may in his opinion be permitted in the oil- tank, compartment, space or other part of the vessels specified in the certificate:

(d) "oil" means any liquid which has a f lash point below 132 deg C (270deg F) and also includes lubricating oils, liquid methane, liquid butane and liquid propane :

Explanation:- Flash point wherever it occurs in these rules, shall be flash point as determined by Abel Closed Cup or Pensky-Marten Closed Cup Procedures as described in I.S.1448-1960.

(e) "Oil-tank" means any tank or compartment in which oil is or has been carried;

(f) "the operations" means-

(i) construction, reconstruction or breaking up of any ship or vessel, repairing, refitting, painting and finishing;

(ii) the sealing, surfing or cleaning of its boilers (including combustion chambers or smoke boxes) ; and

(iii) the cleaning of its bilges or oil-fuel tanks or any of its tanks last used for carrying oil.

For the purpose of this definition the expression "Oil" means oil of any description whether or no oil within the meaning of foregoing definition of that expression:

(g) "Ship" and "vessel" shall have the same meanings as in the Merchant Shipping Act, 1958;

(h) "Shipyard" means any yard or dry dock (including the precincts thereof) in which ships or vessels are constructed, reconstructed, repaired, refitted or finished;

(i) "Stage" means any temporary platform on or from which persons

employed perform work in connection with the operations, but does not include a boatswain's chair;

(j) "Staging" includes any stage, and any upright, thwart, pin, wedge, distance piece, belt or other appliance or material not being part of the structure of the vessel, which is used in connection with the support of any stage, and any guard-rails connected with a stage;

(k) "Tanker" means a vessel constructed or adopted for carrying a cargo of oil in bulk.

ACCESS AND STAGING

(3) General access to vessels in shipyard:- All main gangways giving general access to a vessel in a shipyard, whether from the ground or from a wharf or quay, and all cross, gangways leading from such a main gangway on the vessel shall –

(i) be at least 60 cm. wide

(ii) be securely protected on each side to a height of at least 90cm. by strongly constructed upper and lower hand-rails and by a secure to board projecting at least 15 cm. above the floor;

(iii) be of good construction, sound material and adequate strength

(iv) be stable and wherever practicable, of permanent construction,

(v) be kept in a position as long as required and,

(vi) maintained in good repairs

(4) Access to dry dock:-

(a) Every flight of steps giving access from ground level either to an altar or to the bottom of a dry dock shall be provided throughout on each side with a substantial hand rail. In the case of an open side, secure friends to a height of at least 90 cm. shall be provided by means of upper and lower rails, taut ropes or chains or by equally safe means. For the purposes of this sub-rule a flight steps which is divided into two by a chute for materials, with no space between either side of the chute and the steps shall be deemed to be one flight of steps.

(b) Such hand rails and fencings as aforesaid shall be kept in position save when and to the extent to which their absence is necessary (whether or not for the purpose of the operations) for the access of persons, or for the movement of materials or vessels or for traffic or working, for repair, butt handrails or fencings removed for any of those purposes shall be kept readily available and shall be replaced as soon as practicable.

(5) Access to vessels in dry dock:-

(a) If a ship is lying in a dry dock for the purpose of undergoing any of the operations, there shall be provide means of access for the use of workers at such times as they have to pass to, or from, the ship or dry dock -

(i) where reasonably practicable one more ships accommodation ladders, or

(ii) One or more soundly constructed gangways or similar constructions.

(b) The means so provided shall not be less than 55 cm. wide properly secure and fenced throughout on each side to a clear height of 90 cm. by means of upper and lower rails, taut ropes or chains or by any other safe means, except that in the case of the ships accommodation ladder, such fencing shall be necessary on one side only provided where the other side is properly protected by the ships side.

(c) Where at any dry dock, there is a gangway giving access from an alter of the dock to vessel which is in the dock for the purpose of undergoing any of the operations, and the edge of the altar is unfenced, adequate hand-holds shall be available for any length of the altar which workers commonly use when passing between the gangway and the nearest flight of steps which gives access to ground level.

(6) Access to and from bulwarks:- Where there is a gangway leading on to a bulwark of a vessel there shall be provided.

(a) Wherever practicable, a platform at the in-board end of the gangway with safe means of access therefrom to the decks ; or

(b) Where such a platform is not practicable, a second gangway or stairway leading from a bulwark on to the deck which are either attached to the first mentioned gangway or place continuous to it in which case means of access securely protected by fencing shall be provided from one to other.

(7) Access to staging etc:-

(a) Where outside staging is erected on a shipyard, there shall be provided sufficient ladders giving direct access to the stages having regard to extent of the staging and to the work to be done.

(b) Where a vessel is under construction or reconstruction and workers are liable to go forward or aft or athwarship across or along uncovered deck beams, or across or long floors, sufficient planks shall be provided on these deck-beams or on these floors for the purpose of access to or from places of work, and sufficient and suitable portable ladders shall be provided so as to give access either from the ground or outer bottom plating to the top of the floor.

(c) Without prejudice to any other provision in these rules requiring a greater width, no footway or passageway constructed of planks shall be less than 45 cm. wide.

(8) Ladders:-

(a) Subject to clauses (b) and (c) of this rule, every ladder which affords a means of access, communication of support to a person shall-

(i) be soundly constructed and properly maintained; and

(ii) be of adequate strength for the purpose of which it is used; and

(iii) be securely fixed either-

(i) as near its upper resting place as possible or

(ii) where this is impracticable at its base, or where such fixing is impracticable a person shall be stationed at the base of the ladder when in use to prevent it from slipping; and

(iv) Unless there is other adequate hand-hold, extent to a height of at least 75 cm; above the place of landing or the highest of the right rung to be reached by the foot of any person working on the ladder, as the case may be, or, if this is impracticable, to the greatest practicable height.

(b) Requirements (iii) and (iv) of the preceding clause of this rule shall not apply to fixed ladders of ship or to rope ladders. Effective measures by means of roping off or other similar means shall be taken to prevent the use of fixed ladders of a ship which do not comply with requirements (i) and (ii) of that sub-rule.

(c) Any worker who removes any ladder and sets it up in a new position shall, as regards that ladder, comply with requirements (c) of clause (a) of this rule.

(d) Rope ladders shall provide foot-hold of a depth including any space behind the ladder of not less than 12 cm. and so far as is reasonably practicable, suitable provision shall be made for preventing such ladders from twisting.

(9) Lashing of Ladders:-

(a) A fibre rope, or rope made with stands consisting of wire ropes covered with fibre, shall not be used to secure a ladder used for the purpose of the operation.

(b) A wire rope shall not be used to secure any such ladder unless its ends are furled, but this provision shall not apply in the case of an end which is so situated or protected that a person using the ladder is not liable to come into contact with it s as to suffer injury.

(10) Material for staging:-

(a) A sufficient supply of sound and substantial material and appliances shall be available in convenient place or places for the construction of staging.

(b) All planks and other materials and appliances intended to be used or re-used for staging shall be carefully examined, before being taken into use or re-use in any staging. Every examination required by this clause shall be carried out by a person competent for the purpose.

(11) Staging, dry dock altars and shoring sills:-

(a) All staging and every part thereof shall be of good construction, of suitable and sound material and of adequate strength for the purpose for which it is used and shall be properly maintained, and every upright and thwart shall be kept so fixed, secured or placed in position as to prevent, so far as is reasonably practicable, accidental displacement.

(b) All planks forming stages shall be securely fastened to prevent them from slipping unless they extend 45 cm. or more beyond the ins de edge of the thwart or support on which they rest.

(c) All staging used in connection with the operations shall be inspected before use, and thereafter at regular and frequent intervals, by a responsible person.

(d) All dry dock altars and shoring sills on or from which persons perform work in connection with the operations shall be of sound construction and properly maintained.

(e) All parts of stages, all parts of footways or passageways constructed of planks, and all parts of dry dock altars or shoring connection with the operations, shall so afar as is reasonably practicable, be kept clear of all substances likely to make foot-hold or hand-hold insecure.

(12) Upright used for hosting block:-

(a) If any upright forming part of staging is used as a fixing for a pulley for hosting materials,

(i) it shall be properly housed in the ground or shall otherwise be adequately secured so as to prevent it from rising; and

(ii) it shall be suitably protected against damage by the action of the chain or wire or other means of securing the pulley block to the upright.

(b) No upright forming part of staging shall be used as an anchorage for a load pulley block, unless the upright is not likely to be displaced by such use.

(13) Support of stages on planks:- Planks supported on the rungs of ladders shall not be used to support stages.

(14) Suspended stages:-

(a) Stages suspended by ropes or chains shall be secured as far as possible so as to prevent them swinging.

(b) A fibre rope, or a rope made of stands consisting of wire cores covered with fibre shall not be used for suspending a stage except that fibre ropes may be used in the case a stage of which the suspension ropes are received through blocks.

(c) Chains, ropes, blocks and other gear used for the suspension of stages shall be of sound material, adequate strength and suitable quality, and in good condition.

(d) Appropriate steps shall be taken to prevent ropes or chains used for supporting a stage from coming into contact with sharp edges of any part of vessel.

(15) Boatswain's Chains:-

(a) Boatswains' chains and chains, ropes or other gear used for their suspension shall he of sound material, adequate strength and suitable quality and the chains, ropes or other gear shall be securely attached.

(b) Suitable measures shall be taken to prevent where possible the spinning of a boatswain's chair to prevent the tipping of a boatswain's chair and to prevent any occupant falling therefrom.

(16) Rising stages:- All planks forming a rising stage at the bow end of a vessel shall be securely fastened to prevent them from slipping.

(17) Width of staging..- Without prejudice to the other provisions of these Rules, all stages shall be of sufficient width as is reasonable in all the circumstances of the case to secure the safety of the persons working thereon.

(18) Stages from which a person is liable to fall more than 2 m. or into water:-

(a) This Rule applies to stages from which a person is liable to fall a distance of more than 2 m. or into water, in which there is a risk of drowning.

(b) Every stage to which this Rule applies -

(i) shall so far as is reasonably practicable, be closely boarded, planked or plated

(ii) shall be constructed or placed that a person is not liable to fall as aforesaid through gap in the staging not being a gap necessary and no larger than necessary having regard to the nature of the work being carried on;

(iii) shall be at least 45 cm. wide.

(c) Every side of a stage to which this rule applies shall -

(i) if it is not a side immediately adjacent to any part of a vessel, of be fenced (subject to the provisions of sub rules (d) to (g) this Rule) with a guard rail or guard rails to a height of at least 1 m. above the stage, which rail or rails shall be so placed as to prevent so far as practicable the fall of persons from the stage or from any standing raised place on the stage; or

(ii) if it is a side immediately adjacent to any part of a vessel, be placed as near as practicable to that part having regard to the nature of the work being carried on, and to the nature of the structure of the vessel.

(d) In the case of stages which are suspended by ropes or chains and which are used solely for painting, the fencing required by clause (i) of the preceding sub-clause may be provided by means of taut guard rope or taut guard ropes.

(e) no side of a stage or as the case may be, no part of the side of a stage need be fenced in pursuance of sub-clause (c) (i) of this sub-rule in cases where, and so long as, the nature of the work being carded on makes the fencing of that side, or, as the case may be, that part impracticable.

(f) guard rails provided in pursuance of sub-clause (c) (i) of this sub-rule may be removed for the time and to the extent necessary for the access of persons or for the movement of materials; but guard rails removed for either of these purposes shall be replaced as soon as practicable.

(g) where it is not reasonably practicable to comply with the provisions of sub-clause (c) (i) of this sub-rule, workers shall be provided with suitable safety belts equipped with life lines which are secured with a minimum amount of slack to a fixed structure.

FURTHER PRECAUTIONS AGAINST FALL OF PERSONS, MATERIALS AND ARTICLES

(19) Fencing of dry docks:-

(a) Fencing shall be provided at or near the edges of a dock at a ground level, including edges above flights of steps and chutes for materials. The height of such fencing shall at no point be less than 1 m.

(b) Such fencing as aforesaid shall be kept in position save when and to the extent to which its absence is necessary (whether or not for the purposes of the operations) for the access of persons, or for movement of materials or vessels or for traffic or working, or for repair but fencing removed for any of those purposes shall be kept readily available and shall be replaced as soon as practicable.

(20) Protection of openings:-

(a) Every side or edge of an opening in a deck or tank top of a vessel, being a side or edge which may be a source of danger to workers shall, except where and while the opening is securely covered or where the side or edge is protected to a height of not less than 75 cm. by a earning or other part of the vessel, be provided with fencing to height of not less than 90 cm. above the edge or side and such fencing shall be kept in position save and when to the extent to which its absence is necessary (whether or not for the purposes of the operations) for the access of persons, or the movement of materials, or for traffic or working, or for repair, but fencing removed for any of these purposes shall be kept readily available and shall. he replaced as soon as practicable.

(b) Sub-clause (a) of this sub-rule shall not apply-

(i) to that. part of an opening in a deck or tank top which is at the head of a stairway or ladder-way intended to be used while the operations are being carried on; or

(ii) to parts of a deck or tank to which are intended top. be plated except such parts where plating has necessarily to be delayed so that the opening may be used for the purpose of the operation.

(21) Fall of articles from stages:- Where workers are at work outside a vessel on a stage adjacent to part of the structure of the vessel and other workers are at work directly beneath that stage, the planks of the stage shall be in such a position that no article liable to cause injury to the workers can fall between the planks, and the inside plank of the stage shall be placed as near as practicable to the structure of the vessel having regard to the nature of the work being carried on.

(22) Boxes for rivets etc:-

(a) Boxes or other suitable receptacles for rivets, nuts, bolts and welding rods shall be provided for the use of workers.

(b) It shall be the duty of the workers to use, as far as practicable, the boxes or other suitable receptacles so provided.

(23) Throwing down materials and articles:-

(a) Subject to the provisions of a sub-clause (b) of this sub-rule, parts of staging, tools and other articles and materials shall not be thrown down from a height where they are liable to cause injury to workers, but shall be properly lowered.

(b) When the work to be done necessarily involves the throwing down from a height of articles or materials, conspicuous notices shall be posted to warn persons from working or passing, underneath the place from which articles or materials may fall, or the work shall be done under the direct supervision of a competent person in authority.

(c) No person shall throw down any articles or materials from a height except in accordance with the requirement of this sub-rule.

(24) Loose articles or materials:- As far as practicable, steps shall be taken to minimise the risk arising from loose articles or materials being left lying about in any place from which they may fall on workers or persons passing underneath.

RAISING AND LOWERING

(25) Secureness of loads:-

(a) Loads shall be securely suspended or supported whilst being raised or lowered, and all reasonable precautions shall be taken to prevent danger from slipping or displacement.

(b) Where by reason of the nature or position of the operations load is liable, whilst being moved by a lifting machine or lifting tackle, to come into contact with any object so that the object may become displaced, special measures shall be adopted to prevent the danger as far as reasonably practicable.

(26) Support of lifting machines and lifting tackle:- Every lifting machine and all lifting tackle shall be adequately and suitably supported or suspended having regard to the purpose for which it is used.

(27) Wire ropes with broken wires:- No wire rope shall be used if in any length of ten diameters the total number of visible broken wires exceeds five percent of the total number of wires, or if the rope shows signs of excessive wear of coercion or other serious defect.

(28) Supplies in wire-ropes:- A thimble or loop splice made in any wire rope shall have at least three tucks with a whole stand of the rope and two tucks with one half of the wires cut out of each stand. All tucks shall be against the lay of the rope:

Provided that this sub-rule shall not operate to prevent the use of another form of splice which can be shown to be as efficient as the form of splice specified in this sub-rule.

(29) Knotted chains, etc. :-

(a) No chain or wire rope shall be used when there is a knot tied in any part thereof.

(b) No chain which is shortened or joined to another chain by means of bolts and nuts shall be used

Provided that this does not exclude the use of a chain bolted or joined to another chain by an approved and properly constructed attachment.

(30) Precautions against damage to chains and ropes:- Appropriate steps shall be taken to prevent, so far as practicable, the use of chains or ropes for raising or lowering in circumstances in which they are in or liable to come into contact with sharp edges of plant materials or loads or with sharp edges of any part of the vessel on which work is being carried out.

(31) Loads on lifting appliances:- No loads shall be left suspended from a lifting appliance other than a self sustaining manually operated lifting appliance, unless there is a competent person in charge of the appliance while the load is so left.

(32) Heavy loads:- Where there is reason to believe that a load being lifted or lowered on a lifting appliance weights more than 20 tonnes, its height shall be ascertained by means of an accurate weighing machine or by the estimation of a person competent for the purpose, and shall be clearly marked on the load:

Provided that this sub-rule shall not apply to any load lifted or lowered by a crane which has either a fixed or a derricking jib and which is lifted with an approved type of indicator in good working order which,-

(i) indicates clearly to the driver or person operating the crane the load being carried approaches safe working load of the crane for the radius of the jib at which the load is carried; and

(ii) gives an efficient sound signal when the load moved is in excess of the safe working load of the crane at that radius.

PRECAUTIONS AGAINST ASPHYXIATION, INJURIOUS FUMES OR EXPLOSIONS

(33) Certification for entry into confined spaces likely to contain dangerous fumes:- A Space shall not be certified under section 36 (3)(a) of the Act unless-

(i) effective steps have been taken to prevent any ingress of dangerous fumes

(ii) any sludge or other deposit liable to give off dangerous fumes has been removed and the space contain no other material liable to give off dangerous fumes ; and

(iii) the space has been adequately ventilated and tested for dangerous fumes and has a supply of air adequate for respiration, but no account shall be taken for the purposes of sub-paragraph (ii) of his paragraph of this sub-rule of any deposit or other material liable to give off dangerous fumes in insignificant quantities only.

(34) Precautions against shortage of oxygen:- No person shall enter or remain in any confined space in vessel, being a confined space in which there is reason to apprehend that the proportion of oxygen in the air is so low as to involve risk of persons being overcome, unless either-

(i) the space has been and remains adequately ventilated and a responsible person has tested it and certified that it is safe for entry without breathing apparatus; or

(ii) he is wearing a suitable breathing apparatus and a safety belt securely attached to a rope, the free end of which is held by person standing outside the confined space.

(35) Rivet fires:-

(a) Rivet fires shall not be taken into or used in or remain in any confined space on board or in a vessel unless there is adequate ventilation to prevent the accumulation of fumes.

(b) No person employed shall move a rivet fire into any confined space on board or in a vessel he has been authorised by his employer to move the fire into that space.

(36) Gas cylinders and acetylene generators:-

(a) No cylinder which contains or has contained oxygen or any flammable gas or vapour at a pressure above atmospheric pressure and no acetylene generating plant, shall be installed or placed within 5 M. of any substantial source of heat (including any boiler or furnace when alight) other than the burner or blow pipe operated from the cylinder or plant.

(b) No such cylinder and no such plant shall be taken below the weather deck in the case of a vessel undergoing repair, or below the topmost completed deck in the case of a vessel under construction, unless it is installed or placed in a part of the vessel which is adequately ventilated to prevent any dangerous concentration of gas or fumes.

(37) Further provision as to acetylene generators:-

(a) The following provisions shall be observed as respects any acetylene generating plant:

(i) no such plant shall be installed or placed in any confined space unless effective and suitable provision is made for securing and maintaining the adequate ventilation of that space so as to prevent, as far as practicable, any dangerous accumulation of gas;

(ii) any person attending or operating any such plant shall have been fully instructed in its working and a copy of the maker's instructions for that type of plant shall be constantly available for his use;

(iii) the charging and cleaning of such plant shall so far as practicable be done during day light; and

(iv) partly spent calcium carbide shall not be recharged into an acetylene generator.

(b) No person shall smoke or strike a light or take a naked light or a lamp in or into any acetylene generator house or shed or in or into dangerous proximity to any acetylene generating plant in the open air or on board a vessel;

Provided that this sub-clause shall not apply as respects a generator in the open air or on board vessel which, since it was last charged, has been thoroughly cleaned and freed from any calcium carbide and acetylene gas.

(c) A prominent notice prohibiting smoking, naked lights and lamps shall be exhibited on or near every acetylene generating plant whilst it is charged or is being charged or is being cleaned.

(38) Construction of plant for cutting, welding or heating metal:-

(a) Pipes or hoses for the supply of oxygen or any flammable gas or vapour to any apparatus for cutting, welding or heating, metal shall be of good construction and sound material and be properly maintained.

(b) Such pipes or hoses shall be securely attached to the apparatus and other connections by means of suitable clips or other equally effective appliances.

(c) Efficient reducing and regulating valves for reducing the pressure of the gases shall be provided and maintained in connection with all cylinders containing oxygen or any flammable gas or vapour at a pressure above atmospheric while the gases or vapours from such cylinders are being used in any process of cutting, welding or heating metal.

(d) Where acetylene gas is used for cutting, welding or heating metal-

(i) a properly constructed and efficient back-pressure valve and flame arrestor shall be provided and maintained in the acetylene supply pipe between each burner or blow-pipe and the acetylene generator, cylinder or container from which it is supplied, and shall be placed as near as practicable to the burner or blow- pipe, except that those requirements shall not apply where an acetylene cylinder serves only one burner or blow-pipe; and

(ii) any hydraulic valve provided in pursuance of the preceding clause shall be inspected on each day by every person who uses the burner or blow-pipe on that day and it shall be the duty of every worker who used the burner or blow-pipe to inspect the hydraulic valve accordingly.

(e) The operating valves of burners or blow-pipes to which oxygen or any flammable gas or vapour is supplied for the purposes of cutting, welding or heating metal shall be so constructed, or the operating mechanism shall be so protected that the valves cannot be opened accidentally.

(39) Precautions after use of apparatus for cutting, welding or heating metal:-

(a) In the case of apparatus on board a vessel and used for cutting, welding, or heating metal with the aid of oxygen or any flammable gas or vapour supplied at a pressure above atmospheric pressure, the precautions specified in the following sub-clause of this sub-rule shall be taken when such use ceases for the day or a substantial period and the apparatus is to be left on board, but need not be taken when such use is discontinued merely during short interruptions of work. The requirements in sub-

clauses (a) and (b) of this sub-rule shall not apply during a meal interval, provided that a responsible person is placed in charge of the plant and equipment referred to therein.

(b) Supply valves of cylinders, generators and gas mains shall be securely closed and the valve key shall be kept in the custody of a responsible person.

(c) Moveable pipes or houses used for conveying oxygen of flammable gas or vapour and welding cutting torches shall in the case of vessel undergoing construction, be brought to the topmost completed deck, or in the case of a vessel undergoing repair to a weather-deck, or in either case to some other place of safety which is adequately ventilated to prevent any dangerous concentration of gas or fumes.

Provided that were owing to the nature of the work it is impracticable to comply with the foregoing requirements of this sub-rule, the pipes or noses shall be disconnected from cylinders, generators or gas mains as the case may be.

(d) When cylinders or acetylene generating plant have been taken below deck as permitted by sub- clause (b) of sub-rule (36) such cylinders or acetylene generating plant shall be brought to a weather deck, or, in the case of vessel undergoing construction to the topmost completed deck.

(40) Naked light and hot work on oil-carrying vessels:-

(a) Subject to the provisions of sub-clause (b) of this rule and to the provisions of sub-rule (48) and without prejudice to the provisions of Rules 46 and 47, no naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of this sub-rule-

(i) shall be permitted to be applied to or to be in or any hot work permitted to be carried out in any part of the tanker, unless, since oil was last carried in that tanker, a naked light certificate, has been obtained and is in force in respect of those part of the tanker for which in the opinion of a competent analyst, a naked light certificate is necessary

Provided that a naked light, fire or lamp of a kind specified, in writing by a competent analyst may be applied to, or be in,. or any hot work of a type specified by him carried on any part of the tanker so specified

(ii) shall be permitted-

(a) to be in any oil-tank on board or in a vessel in which oil tank the oil last carried was oil having a flash point of less than 23degC (73 deg F). or was liquid methane, liquid propane or liquid butane, or any hot work permitted to be carried out in a such oil-tank or vessel unless a naked light certificate has previously been obtained on the same day and is in force in respect of that oil tank and of any oil-tank, compartment or space adjacent thereto ;

(b) to be applied to the outer surface of any oil-tanker in board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid or any work of such a nature which is likely to produce sufficient heat capable of igniting inflammable gas or vapours permitted to be carried out on the outer surface of such oil-tank or vessel, unless a naked light certificate has

previously been obtained on the same day and is in force in respect of that oil-tank ;

(c) to be applied to the outer surface of, or to be in any compartment or space adjacent an oil-tank on board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid, or any hot work permitted to be carried out in such compartment or space as aforesaid or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, permitted to be carried out on the outer surface of such compartment or space, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that compartment or space ;

Provided that where in any such case referred to in sub-clause (i), (ii) or (iii) of this sub-rule a competent analyst has certified that daily naked light certificates are necessary or are necessary only to specified extent, such a daily certificate need not be obtained or, as the case may be, need only be obtained to the specified extent;

(iii) shall be permitted to be applied to the outer surface, of, or to be in, any oil-tank on board or in a vessel or any hot work permitted to be carried out in any such oil-tank or vessel or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours permitted to be carried out on the outer surface of the oil-tank or vessel, unless since oil was last carried in that oil-tank, a naked light certificate has been obtained and is in force in respect of that oil tank

(iv) shall be permitted to be applied to the outer surface of, or to be in, any compartment or space adjacent to an oil-tank on board or in a vessel or any hot work permitted to be carried out in any such compartment or space, or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, permitted to be carried out on the outer surface of any such compartment or space, unless since oil was last carried as car o in that oil-tank, a naked light certificate has been obtained and is in force in respect of that compartment or space.

(b) Notwithstanding anything in clause (a) of this sub-rule, heated rivets may be permitted in any place without naked light certificate being in force in respect of that place if expressly so authorised by competent analyst who certified that after adequate and suitable testing, he is satisfied having regard to all the circumstances of the atmosphere becoming ease, including the likelihood or otherwise of the atmosphere becoming flammable, that the place is sufficiently free from flammable vapour, but such heated rivets shall, where practicable, be passed through tubes.

(c) No person shall introduce, have or apply naked light, fire or lamp (other than safety lamp of a type approved for the purpose of this sub-rule) into, in or to any place where they are prohibited by this sub-rule.

(d) No person shall carry out hot work or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, in any place or any surface where they are prohibited by this sub-rule.

(e) In this sub-rule the, expression 'competent analyst' means an analyst who is competent to give a naked light certificate.

(41) Entering oil-tanks: -

(a) No person (other than an analyst entering with a view to issuing a certificate of entry) shall, unless he is wearing a breathing apparatus of a type approved for the purpose of this sub-rule, enter or remain in an oil-tank on in a vessel unless since the oil-tank last contained oil, a certificate of entry has been obtained and is in force in respect of the tank.

(b) Without prejudice to clause (a) of this sub-rule, no person (other than an analyst entering as aforesaid) shall be allowed or required to enter or remain in an oil-tank on board or in a vessel in which oil tank, the oil last carried was oil having a flash point of less than 230deg C (73deg F) unless since the oil-tank last contained oil, an analyst has certified that the atmosphere is sufficiently free from inflammable mixture.

(c) The provisions of this sub-rule are without prejudice to the requirements of sub-rule (34).

(42) Duration of certificates:- Any naked light certificates or certificates of entry may be issued subject to a condition, that it shall not remain in force after a time specified in the certificate.

(43) Posting of certificates:- Every occupier for whom a naked light certificate or certificate of entry is obtained shall ensure that the certificate or a duplicate thereof is posted, as soon as may be, and remains posted in a position where it may be conveniently read by all persons, concerned.

(44) Maintaining safe atmosphere:-

(a) When conditions in an oil-tank are such in respect of which a naked light certificate has been issued that there is possibility of oil vapour being released from residues or other sources, test shall be carried out by a competent analyst at such intervals, as may be required so as to ensure that the condition in the tank are maintained safe.

(b) Whenever hot work carried on or a naked light, fire or lamp is allowed to be, on the whether deck over spaces, in respect of which a naked light certificate has not been

issued all covers of man holes or openings on deck and all valves (except those which are connected to high vent pipes) connecting the weather deck with the said spaces, shall be closed.

(c) A record of all the tests carried out for the purpose of sub-rules(34),(40) and (4 1) shall be maintained in a register which should furnish the date, time location and results of the tests.

(45) Cleaning of oil-tanks:-

(a) Subject to the provisions of sub-rule (4), before a test f6r flammable vapour is carried out with a view to the issue of a naked light certificate for the purposes of sub-rule (40) in respect of an oil- tank on board or in a vessel, that oil-tank shall, since oil was last introduced into the tank, be cleaned and ventilated in accordance with clause (b) of this sub-rule.

(b) The said cleaning and ventilation shall be carried out by the following methods, namely-

(i) the oil-tank shall be treated in such a manner and for such period as will ensure the vaporisation of all volatile oil;

(ii) all residual oil on any sludge or other deposition in the oil tank shall be removed therefrom;

(c) After the oil tank has been so cleaned

(i) All covers of man-holes and other openings therein shall be removed and it shall be thoroughly ventilated by mechanical or other efficiency means with a view to the removal of all oil vapour; and

(ii) The interior surfaces, if any deposit remains thereon, shall be washed or scrapped down.

(46) Invalidation of certificates:-

(a) If during the course of work in, or to the surface or, any part of tanker or aircraft carrier, any pipe or tank joint is opened or broken on any other event occurs so that there is a risk of oil vapour entering or arising in that part of the tanker or aircraft carrier, that work shall be suspended thereafter any certificates of entry previously issued in respect of any oil-tank, oil-tank in that part and any naked light certificate previously issued in respect of that part shall be no longer in force.

(b) If (in the case of vessel other than a tanker or a aircraft carrier) during the course of work in any oil-tank or any compartment or space adjacent thereto, any pipe or tank joint is opened or broken or any other event occurs so that, there is a risk of oil vapour entering or arising in the oil tank, or in any compartment or space adjacent thereto shall be suspended and thereafter any certificate of entry previously issued in respect of oil tank and any naked light certificate previously issued in respect of oil-tank or any compartment or space adjacent thereto shall be no longer in force.

(47) Provisions as to work in other compartment or spaces:-

(a) Without prejudice to the other provisions of these rules, if the presence of oil in such quantity and in such position as to be likely to give rise to fire or explosion is detected in any part of a vessel, being a part to which this sub-rule applies and in which repairs of the following, kind are to be or are being undertaken, that is to say repairs involving the use of a naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of sub-rule (40), or involving hot work, such repairs shall not be started or continued until a naked light certificate has been issued or, as the case may be, reissued in respect of that part of the vessel).

(b) This sub-rule shall apply to beiges, shaft tunnels, pump rooms, lamp rooms, and to compartments and spaces other than those to which clause (a) (iv) of sub-rule (40) applies.

(48) Exemptions:- If the Chief Inspector is satisfied, by reason of the nature of the work and the circumstances in which it is carried out, that any provisions of sub-rules (33) and (45) or part thereof can be suspended or relaxed without danger to the health or safety of any person, he may grant suspension or relaxation in writing specifying such conditions as he may consider fit. Any such suspension or relaxation may be revoked at any time.

PRECAUTIONS IN USE OF ELECTRICAL ENERGY

(49) Earthing:- Electric energy other than that generated by an independent generating unit on board shall not be taken for use, or used in, or in connection with any of the operations unless the body of the ship is securely earthed in such a manner as to ensure an immediate and safety discharge of energy to the earth. A ship or vessel shall not be considered as securely earthed for the purpose of this rule, only on account of its being partly submerged in water.

(50) Arc welding:-

(a) Electric arc welding shall not be carded on in connection with any of the operations unless separate and fully insulated welding return conductor or conductors, as the case may be, of adequate electrical capacity are provided for return of the current to the transformer or generator of the welding set.

(b) The return end of source of the welding current shall not be earthed.

(c) All work on which welding is carried on shall be securely earthed independently to an earth electrode by means of conductor or conductors, as the case may be, of adequate capacity, unless all such works are connected to any structure of the ship or vessel in such manner as to ensure adequate connection to earth as aforesaid.

(51) Cutting of energy in certain cases:- Electrical energy shall be cut off from all portable electric tools and manual electrode holders within any tank compartment or space

referred to in sub-rules (34) and (40) or in any other confined space during all times when such tools or holders are not in operation:

Provided that for determining whether any such portable electric tool or electrode holder is not in operation no account shall be taken of brief interruptions of work occurring during normal working.

Provided further that energy may not be cut off from any such equipment if a responsible person is left in charge of it in such tank, compartment or space concerned;

Provided further that cutting of all electrical energy by operation of any switch or control provided on the portable tool or electrodes holder itself should not be taken as fulfilling the requirements of this sub-rule.

MISCELLANEOUS SAFETY PROVISIONS

(52) Lighting:- All parts of a vessel and all other places where the operations are being carried on, and all approaches to such parts and to places to which a worker may be required to proceed in the course of his employment shall be sufficiently and suitably lighted in providing such lighting, due regard shall be given to avoidance of glare and formation of shadows, to the safety of the vessel and cargo, of the navigation of other vessels, and to any local statutory requirements as to the lighting of the harbour or dock.

(53) Work in boilers etc.:-

(a) No work shall be permitted in any boiler, furnace or boiler flue until it has been sufficiently cooled to make work safe for the workers.

(b) Before any worker enters any steam boiler which is one of a range of two or more steam boilers,

(i) all inlets through which steam or hot water might otherwise enter the boiler from any other part of the range shall be disconnected from that part, or

(ii) all valves or taps controlling such entry shall be closed and securely locked.

(c) While workers remain in any steam boiler to which clause (b) of this sub-rule applies all such inlets as are referred to in that clause in shall remain disconnected or all such valves or taps as are there referred to shall remain closed and securely locked.

(d) No worker shall be allowed or required to enter or remain in, and no person shall enter or remain, in any steam boiler to which clause, (b) of this sub-rule applies unless the provisions of that clause are being complied with.

(54) Hatch beams:- The hatch beams of any hatch in use for the options shall, if not removed be adequately secured to prevent their displacement.

(55) Jumped-up bolts:- Bolts which have been jumped-up and rescrewed shall not be used for securing plates on the sides of vessels, and no worker shall use such bolts for this purpose.

(56) Work in or on life boats..-

(a) Before workers are permitted to work in or on any life boat, either stowed or in suspended positions, precautions shall be taken to prevent the boat from falling due to accidental tripping of the releasing gear or movement of the davits and capsizing of the boat if in chocks.

(b) Workers shall not be permitted to remain in fire boats while the life boats are being hoisted into final stowed position.

PROTECTIVE WEAR

(57) Hand protection:- Adequate protection for the hands shall be available for all workers when using cutting or welding apparatus to which oxygen or any flammable gas vapour is supplied a pressure greater than atmospheric pressure or when engaged in machine caulking or machine riveting or on transporting or stacking plate or in handling plates at machines.

(58) Protection in connection with cutting or welding:-

(a) Suitable goggles fitted with tinted eye-pieces shall be provided and maintained for all persons employed when using cutting or welding apparatus to which oxygen or any flammable gas or vapour is supplied at a pressure above atmospheric pressure

(b) There shall be provided and maintained for the use of all persons employed when engaged in the process of electric welding-

(i) suitable helmets or suitable head shields or suitable hand shields to protect the eyes and face from hot metal and from rays likely to be injurious; and

(ii) suitable gauntlets to protect the hands forearms from hot metal and from rays likely to be injurious.

(c) When electric welding is in progress at any place and persons other than those engaged in that process are employed in a position where the rays are likely to be injurious to their eyes, screens shall, whenever practicable, be provided at that place for the protection of those persons. Where it is not practicable to provide effective protection of these persons by screening, suitable goggles shall be provided for their use.

(59) Eye protection for other processes:- Suitable goggles of effective screens shall be provided to protect the eyes of all workers in any of the following processes :

(a) the cutting out or cutting off of cold rivets bolts from boilers or other plant or form ships ;

(b) the chipping, scaling or scurfing or boiler or ship's plates

(c) drilling by means of portable machine tools

(d) dry grinding of metals.

(60) Head Protection:- When workers are employed in areas where there is danger of falling objects they shall be provided with suitable safety helmets.

(61) Safety belts and life lines :-

(a) Whenever any worker is engaged on work at place from which he is liable to fall more than 2 m. he shall be provided with safety belts equipped with life lines which are secured with a minimum of slack, to a fixed structure unless any other effective means such as provision of guard rails or ropes are taken to prevent his falling.

(b) All safety belts and life lines shall be examined at frequent intervals by a competent person to ensure that no belt or life line which is not in good condition is used.

HEALTH AND WELFARE

(62) Prohibition of employment of young persons in certain processes:- Employment of young persons are prohibited in the following processes namely-

(a) the application of asbestos by means of a spray; or
(b) the breaking down for removal of asbestos lagging; or
(c) the cleaning of socks or other container which have contained asbestos; or
(d) the cutting of material containing asbestos by means of portable power driven saws; or
(e) the scaling, surfing or cleaning of boilers, combustion chambers or smoke boxes where his work exposes him to dust of such a character and to such an extent as to be likely to be injurious or offensive to persons employed in such work.

(63) Lead Processes:-

(a) Lead paint shall not be applied in the form of a spray, in the interior painting of any part of a ship or vessel.
(b) Wherever lead sheathing work is carried on for making cold storage chambers in the ships, efficient exhaust draughts with portable extractors should be provided to remove the lead fumes from the confined spaces.

(64) Stretchers ambulances and ambulances rooms etc :-

(a) In every shipyard there shall be provided and kept readily available-

(i) a sufficient number of suitably constructed sling stretchers or other similar appliances for raising injured persons;
(ii) a sufficient number of carrying or wheel stretchers; and
(iii) a sufficient supply of suitable reviving apparatus and oxygen, and the stretchers and appliances and apparatus so provided shall be properly maintained.

(b) In every shipyard there shall always be readily available during working hours responsible person or responsible persons whose duty it is to summon an ambulance or other means of transport if needed in cases of accident or illness. Legible copies of a notice indicating that person or, as the case may be, those persons shall be affixed in prominent positions in every shipyard.

(c) In every shipyard other than a dry dock available for hire-

(i) in which the number of persons employed normally exceeds five hundred (500) ; or

(ii) in which the number of persons employed normally exceeds one hundred and which is more than ten miles from a hospital; there shall be provided and maintained in good order and in clean condition a properly constructed ambulance room containing at least the equipment prescribed by the rules framed under Section 45 of the Act. The room shall be used only for the purpose of treatment and rest and shall be in the charge of a suitably qualified person who shall always be readily available during working hours, and record shall be kept of all cases of accident or sickness treated at the room.

(65) Young persons:-

(a) No young person shall, until he was employed in a shipyard or shipyards for at least six (6) months be employed in connection with the operations in a shipyard on a stage from which, or in any part of a ship where he is liable to fall a distance of more than 2 m. or into water in which there is a risk of drowning.

(b) Any young person under the age of sixteen shall, when employed in the operations in shipyard, be placed under the charge of an experienced workman.

(66) Safety supervision:- In the case of every shipyard other than a dry dock available for hire being a shipyard where the number of workers regularly or from time to time, exceeds five- hundred, a person experienced in the work of such yards shall be appointed and employed exclusively to exercise general supervision of the observance of these sub-rules and to promote the safe conduct of the work generally.

139. Railways in Factories

(1) This rule shall apply to railways in the precincts of a factory which are not subject to Indian Railways Act 1890.

(2) Gateways:- A gateway through which a railway track passes shall not be used for the general passage of workers into or out of a factory.

(3) Barriers and Turn gates:-

(a) Where buildings or walls contain doors or gates which open to a railway tract, a barrier about 1 metre high shall be fixed parallel to and about 60 cm. away from the building or wall outside the opening and extending several feet beyond it at other end, so that any person passing out may become aware of an approaching train when his pace is checked at the baffler.

If the traffic on the nearest track is all in one direction, the barrier shall be in the form of an " L" with end of the short leg abutting on to the wall and the other end opening towards the approaching train ;

(b) If the distance between wall and track cannot be made to accommodate such a barrier, the barrier of a turngate shall be placed at the inside of the opening ; and

(c) Where a footway passes close to a building or other obstructions as it approaches a railway track, a barrier or a turngate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.

(4) Crowds:-

(a) Worker's pay-windows, first-aid stations and other points where a crowd may collect shall not be placed near a railway track ; and

(b) At any time of the day when workers are starting or ending work all railway traffic shall cease for not less than five (5) minutes.

(5) Locomotive:-

(a) No locomotive shall be used in shunting operations unless it is in good working order;

(b) Every locomotive and tender shall be provided with efficient breaks, all of which shall be maintained in good working order. Brake shoes shall be examined at suitably fixed intervals and those that are worn out replaced at once

(c) Water-gauge glasses or every locomotive whatever its boiler pressure, shall be protected with substantial glass or metal screens

(d) Suitable steps and hand-holds shall be provided at the corners of the locomotive for the use of shunters

(e) Every locomotive crane shall be provided with lifting and jacking pads at the four corners of the locomotive for assisting in re-railing operations ; and

(f) It shall be clearly indicated on every locomotive crane in English and in language understood by the majority of the workers in the factory, for what weight of load and at what reading the crane safety.

(6) Wagons:-

(a) Every wagon (and passenger coach, if any) shall be provided either with self-acting brakes capable of being applied continuously or with efficient hand brakes which shall be maintained in good working order. The hand brakes shall be capable of being applied by co-person on the ground and fitted with a device for retaining them in the applied position

(b) No wagon shall be kept standing within three metres of any authorised crossing ; and

(c) No wagon shall be removed with the help of crow bars or pinch bars.

(7) Riding on locomotive, wagon or other rolling stock:- No person shall be permitted to be upon (whether inside or outside) any locomotive wagon or after rolling stock except where secure foot- hold and handhold are provided.

(8) Attention to brakes and doors:-

(a) No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and, where it is on a gradient, without sufficient number of properly constructed scotches placed firmly in position; and

(b) No train shall be set in motion until the shunting jamadar has satisfied himself that all wagon doors are securely fastened.

(9) Projecting loads and cranes:-

(a) If the load on a wagon projects beyond its length, a guard or dummy-truck shall be used beneath the projection ;

(b) No loco-crane shall travel without lead unless the jib is completely lowered and positioned in line with the track and

(c) when it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to rest.

(10) Loose shunting:- Loose-shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. A wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose-shunted unless attached to it at least another wagon with such brakes. Loose-shunting shall not be performed with, or against a wagon containing passengers, live-stock or explosives.

(11) Fly-shunting..- Fly-shunting shall not be permitted on any factory railway.

(12) The shunting Jamadar:-

(a) Every locomotive or wagon in motion in a factory shall be kept under the control of a well trained jamadar ; and

(b) Before authorising a locomotive or wagon to be moved, the shunting jamadar shall satisfy himself that no person is under or in between or in front of the locomotive or wagon.

(13) Hand Signals:- The hand signals used by the shunting jamadar in day and night shall be those prescribed by the shunting rules of railways, working under the Indian Railway Act 1890 (IX of 1890).

(14) Night work and fog:-

(a) In factories, where persons work at night, no movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than 10 lux as measured at the horizontal plane at the ground level ; and

(b) In no circumstances any locomotive or train shall be moved between sunset and sunrise or at any time when there is fog, unless it carries a white head light and a red rear light.

(15) Speed control:-

(a) A locomotive or train shall not be permitted to move at a speed greater than seven kilometers per hour ; and

(b) A train, locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than 10 metres during the whole of its journey by shunting jamadar. He shall be provided with a signalling flags or lamp and whistle necessary for calling the attention of the driver.

(16) Tracks:-

(a) The distance (i) between tracks and (ii) between tracks and buildings, blind walls or other structures and (iii) tracks and materials deposited on the ground shall be respectively not less than-

(aa) from centre to centre of parallel tracks, the overall width of the widest wagon of that gauge plus twice the width of the door of such a wagon when opened directly outward plus 1 metre ;

(bb) from a building or structure other than a loading platform to the centre of the nearest track, half the overall width of the widest wagon of that gauge, plus the width of its door when opened outward, plus 1.5 metres ; and

(cc) from material stacked or deposited alongside the track, on the ground or on a loading platform, to the centre of the nearest track, half the, overall width of the widest wagon of that gauge, plus half the width of its door when opened directly outward, plus 1 metre.

(b) Sleepers of a track shall be in level with of the ground and at all crossings of the track with a road or walkway, the surface of the road or walkway shall be in level with the top of the rails ;

(c) All track ends shall be equipped with buffer stops of adequate strength ;

(d) Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a building or in a wall which conceals an approaching trade from view, between the building and the track as prescribed in clause (a) of sub-rule (3).

(e) Where track are carded on a gantry or other elevation, a safe footway or footways with hand rails and toe-boards shall be provided at all positions where persons work or pass on foot, and where there is an opening in the stage of an elevated track for the dropping of materials to a lower level, the position shall be adequately fenced or the opening itself provided with a grill through which a person cannot fall

(f) All point levers shall have their movements parallel, to, not across, the direction of the track ;

(g) All loading platforms which are more than 60 cms above the level of the ground on which the track is laid and more than 15 metres in length, shall be provided with stops at intervals not greater than 15 metres apart from to enable the platform to be easily mounted from the track

(h) Turn tables on plant railways shall be provided with locking devices which will prevent the tables from turning while locomotives or wagon are being run on or off the tables ; and

(i) workers shall be prohibited from passing under, between or above railway wagons.

(17) Crossings:-

(a) At all crossings of a track with a road or walk way, danger or crossing signs and wherever reasonably practicable, blinking lights or alarm lights shall be provided, at all important crossings, gates or barriers manned by watchman shall be provided. Swinging gate and barriers shall be secured against inadvertent opening or closing.

162. Reaction vessels and kettles

(1) This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure not above the atmospheric pressure but in which there is likelihood of pressure being created above the atmospheric pressure either due to reaction getting out of control or due to any other circumstances.

(2) In the event of the vessel being heated by electrical means, suitable thermostatic control devices shall he provided to prevent the temperature exceeding the safety limit.

(3) Where steam is used for heating purposes in a reaction vessel, it shall pass through a suitable pressure reducing valve or any other suitable automatic device to prevent escape of excessive steam into the vessel so that the maximum permissible pressure of steam only is allowed into the supply line itself

(4) Suitable safety valve or rupture disc of adequate size and capacity shall be provided to effectively prevent the pressure being built up in the reaction vessel beyond the safety limit. Effective arrangements shall be made to ensure that the released gases, fumes, vapours, liquids or dust, as the case may be, are lead away and disposed of through suitable pipes without causing any hazard. Where flammable gases or vapours are likely to be vented out as discharge from the vessel, it shall be provided with a flame arrestor.

(5) Every reaction vessel shall be provided with a pressure gauge having the appropriated range.

(6) In addition to the devices as mentioned in the foregoing provisions there shall also be provided means or devices for automatically stopping the feed into the vessel as soon as process conditions excessively deviate from the normal limits and which deviation can be considered to be dangerous.

(7) Where necessary, an effective system for cooling, flooding or blanketing shall be provided, for the purpose of controlling the reaction and process conditions within the safe limits of temperature and pressure.

(8) An automatic auditory and visual warning device, shall also be provided for clear warning whenever process conditions exceed the normal limits. This device, wherever possible, shall be integrated with automatic process correction systems.

(9) A notice pointing out the possible circumstances and conditions under which pressures above atmospheric pressure may be built up in the reaction vessel, the dangers involved and the precautions to be taken by the operators shall be displayed clearly at a conspicuous place near the vessel which always shall be in a visible conditions

163. Thermic Fluid heaters

(1) All heaters shall be on such construction that coils are removable for periodic cleaning, visual inspection and hydraulic test.

(2) Suitable arrangement shall be made for cooling furnace effectively in case of failure.

(3) Before restarting the furnace, it shall be effectively purged.

(4) Velocity of flow of thermic fluid shall not be allowed to fall below the minimum recommended by the manufacturers while the heater is in operation.

(5) The thermic fluid shall be circulated in a closed circuit formation with an expansion cum deaerator tank. This tank shall be located outside the shed where the heater is installed.

(6) Every heater shall be provided with a photo-resister actuated audio-visual alarm indicate flame failure and automatic burner cut off.

(7) The stack temperature motor-cum-controller with audio visual alarm shall be provided so as to warn the operator in case the outlet temperature exceeds the specified min.

(8) Where inspection doors are provided on the furnace they shall be interlocked with the burner itself so that they cannot be opened until burner is shut off and furnace is cooled sufficient.

(9) All heaters shall also be provided with the following safety devices:-

(i) level control in the expansion tank

(ii) temperature control of thermic fluid

(iii) differential pressure switch on the out let line of the heater tubes and

(iv) temperature control device for the fuel oil supply the burner.

(10) All devices mentioned in paragraph 9 shall have interlocking arrangement with burner so that in case of any predetermined limits being crossed the supply of fuel and air to burner shall automatically be cut-off.

(11) All safety interlocks when operated shall be indicated on the control panel of the heater by a suitable audio-visual alarm.

(12) Every heater unit shall be provided as a standard necessary an arrangement for sniffing with low pressure steam or nitrogen for putting out the fire.

(13) Electric panel for the heater shall be located near the heater but not so close as to be exposed to spilling or leaking oil.

(14) The heater shall be located in a place partitioned off with fire proof material from other manufacturing activities.

(15) Explosion vent shall be so installed that release takes place at safe location.

(16) The heater coil shall be subjected to pressure test by competent person once at least in every 12 months. This test pressure shall not be less than twice the operating pressure.

(17) If repairs are carded out to the coil, it shall be tested before taking it into use.

(18) The thermic fluid shall confirm to the specifications prescribed by the manufacturers and shall be tested by competent person for suitability at least once in every three months period. Such test shall include test for acidity, suspended matter, ash contents, viscosity and flash point.

(19) Cleaning of internal surface of the heater or soot and check up of refractory surface on the inside shall be carried out every month or as often as required depending upon working conditions. The coils shall be removed and surface of the coils

cleaned thoroughly once at least in a period of six months. The nozzles of filters and pumps shall be cleaned once a week during the period of use.

(20) A separate register containing the following information shall be maintained:

(i) Weekly checks carried out confirming the effectiveness of the interlock

(ii) Weekly checks confirming that all accessories are in goof state of repairs ; and

(iii) information regarding fuel oil temperature, pressure thermic fluid inlet/outlet pressure and temperature fuel gas temperature recorded at hourly interval.

(21) The heater when in operation shall always be kept in charge of a trained operator.

140. Oven and Driers

(1) Application:- This rule shall apply to ovens and driers, except those used in laboratories or kitchens of any establishment and those which has a capacity below 325 litres.

(2) Definitions:- For the purpose of this rule, "oven or drier" means any enclosed structure, receptacle, compartment or box which is used for baking, drying or otherwise processing of any article or substance at a temperature higher than the ambient temperature of the air in the room or space in which a flammable or explosive mixture of air and a flammable substance, is likely to be evolved within the enclosed structure receptacle, compartment or box or part thereof on account of the article or substance which is baked, dried or otherwise processed within it:

(3) Separate electrical connection:- Electrical power supplied to every oven or drier shall be by means of a separate circuit provided with an isolation switch.

(4) Design, construction, examination and testing:-

(a) Every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength, from any patent defects and safe if properly used.

(b) No oven or drier shall be taken into use in factory for the first time unless a competent person has thoroughly examined all its parts and carried out the tests as are required to establish that the necessary safe systems and controls provided for safety in operation for the processes for which it is to be used and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.

(c) All parts of an oven or drier which has undergone any alteration or repair which has to effect of modifying any of the design characteristics, shall not be used unless a thorough examination and tests as have been mentioned in clause (1) has been carried out by a competent person and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.

(5) Safety Ventilation:-

(a) Every oven or drier shall be provided with a positive and effective safety ventilation system using one or more motor-driven centrifugal fans so as to dilute any mixture of air and any flammable substance that may be formed within the oven or drier and maintain the concentration of the flammable substance in the air at a safe level of dilute.

(b) The safe level of dilution referred to in clause (a) shall be so as to achieve a concentration of the concerned flammable substance in air of not more than 25 per cent of its lower explosive limit:

Provided that a level of concentration in air upto 50 per cent of the lower explosive limit of the concerned flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which-

(i) Shows continuously the concentration of the flammable substance in air present in the oven or drier at any instant

(ii) Sounds an alarm when the concentration of the flammable substance in air in any part of the oven or drier reaches a level of 50 per cent of its lower explosive limit; and

(iii) Shuts down the heating system of the oven or drier automatically when the concentration in air of the flammable substance in any part of the oven or drier reaches a level of 60 per cent of its lower explosive limit, is provided to the oven or drier and maintained in efficient working condition.

(c) No oven or drier shall be operated without its safety ventilation system working in an efficient manner.

(d) No oven or drier shall be operated with a level of dilution less than what is referred to in clause (b).

(e) Exhaust ducts of safety ventilation systems should be so designed and placed that their ducts discharge the mixture of air and flammable substance away from the workrooms and not near windows or doors or other openings from where the mixture could re-enter the workrooms.

(f) The fresh air admitted into the oven or drier by means of the safety ventilation system shall be circulated adequately by means of circulating fan or fans through all parts of the oven or drier so as to ensure that there are no locations where the flammable substance can accumulate in the air or become pocketed to any dangerous degree.

(g) Throttling dampers in any safety ventilation system should be so designed by cutting away a portion of the damper or otherwise, that the system will handle at least the minimum ventilation rate required for safety when they are set in their maximum throttling position.

(6) Explosion panels..-

(a) Every oven or drier having an internal total space of not less than half cubic meter shall be provided with suitably designed explosion panels so as to allow release of the pressure of any possible explosion within the oven or drier through explosion vents. The area of openings to be provided by means of such vents together with area of openings of any access doors which are provided with suitable arrangements for their release in case of an explosion shall be not less than 2200 square centimetre for every one cubic meter of volume of the oven or drier. The design of the explosion panels and doors as above said shall be much as to secure the complete release under the internal pressure of 0.25 Kg. per square centimeter.

(b) The explosion releasing panels, shall as far as practicable, be situated at the roof of the oven or drier or at those portion of the walls where persons not remain in connection with operation of the oven or drier.

(7) Interlocking arrangements: -

(a) In each oven or drier efficient inter-locking arrangements shall be provided and maintained to ensure that-

(i) all ventilating fans and circulating fans whose failure would adversely effect the ventilation rate or flow pattern are in operations before any mechanical conveyor that may be provided for fee~ the articles to be processed in the oven or drier is put into operation.

(ii) failure of any of the ventilating or circulating fans will automatically stop any conveyor as referred to in clause (i) as may be provided, as well as stop the fuel supply by closing the shut off valve and shut off the ignition in the case of gas or oil fired oven and in the case of electrically heated ovens switch off the electrical supply to the heaters.

(iii) the above said mechanical conveyor is set in operation before the above said, shut off valve can be energized; and

(iv) the failure of the above said conveyor will automatically close and above said shut off value in the case of ovens and driers heated by gas, oil or steam and reactivate the ignition system, or cut off the electrical heaters in the case of electrically heated ovens or furnaces.

(8) Automatic pre-ventilation:- Every oven or drier heated by oil, steam, gas or electricity shall be provided with an efficient arrangement for automatic pre-ventilation consisting of at least 3 volume changes with fresh air by operation of the safety ventilation fans and the circulating fans (if used) so as to effect purging of the oven or drier of any mixture of air and a flammable substance before the heating system can be activated and before the conveyor can be placed in position.

(9) Temperature Control:- Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature within does not exceed a safe upper present limit to be decided in respect of the particular processing being carried on.

(10) Multistage processes:- Wherever materials are to be processed 'in ovens or driers in successive operations, suitable arrangements should be provided to ensure that the operating temperatures necessary for safe operation at each stage are maintained within the design limits.

(11) Combustible substances not to drip on electrical heaters or burners flame:- Effective arrangements shall be provided in every oven or drier to prevent dripping of combustible substances on electric heaters or burner flame used for heating.

(12) Periodical examination testing and maintenance:-

(a) All parts of every oven and drier shall be properly maintained and thoroughly examined and the various control as mentioned in this rule and the working of the oven or drier tested at frequent intervals to ensure its safe operation by a responsible person designated by the occupier or manager, who by his experience and knowledge of necessary precautions against risks of explosion is fit to undertake such work.

(b) A register shall be maintained in which the details of the various tests carried out from time to time under clause (a) shall be entered and every entry made shall be signed by the person making the tests.

(13) Training of operators:- No person shall be assigned any task connected with operation of any oven or drier unless he has completed 18 years of age and he is properly trained.

(14) Polymerizing machines:-

(a) Printed fabric shall be thoroughly dried by passing them over drying cans or through hot flue or other equally effective means, before the same is allowed to pass through polymerising machines.

(b) Infrared ray heaters of polymerizing machines shall be cut off while running the prints.

141. Examination of eye sight of certain workers

(1) No person shall be employed to operate a crane, locomotive or work-lift truck, or to give signals to a crane or locomotive operator unless his eye sight and colour vision have been examined and declared fit by a qualified ophthalmologist to work whether with or without the use of corrective glasses.

(2) The eye sight and colour vision of the person employed as referred to in clause (i) shall be examined at least once in every period of 12 months up to the age of 45 years and once in every 6 months beyond that age.

(3) Any fee payable for an examination of a person under this sub-rule shall be paid by the occupier shall not be recoverable from that person.

(4) The record of examination or re-examination carded out as required under sub-rule(l) shall be maintained in Form No. YY

FORM NO.YY
Record of Eye Examination

Serial Number	Department/ works	Name of worker	Sex	Age (on last Birth day)
1	2	3	4	5

Occupation		Examination of eye sight		Signature of Ophthalmologist	Remarks
Nature	Date of employment	Date	Result		
6	7	8	9	10	11

Rules Under Section 133(2)(zzq)

142.Notice of Change of manager in Factories

(1) The occupier of every factory shall, within seven days of any change in the manager of any factory, send notice thereof in Form No. to the Inspector cum facilitator

(2) During the period for which no person was named as manager under this code or the person so named has not managed the affairs in the factory, the occupier shall be deed to have been the manager under this code for that period.

143. **Guidelines, instructions and records:** without prejudice to the general responsibility of the Occupier to comply with the provisions this code and Rules, the Chief Inspector cum facilitator may, from time to time, issue guidelines, directions and instructions regarding the general duties of the occupier relating to matters connected to the administration of the code and rules in factories.

144.Competent Person as per section 2(1)(l) of the code for factories:-

2. The State Government may, by notification, formulate a scheme, to empanel any person or an institution of repute, as a Competent Person under the code for the purpose of carrying out tests, examinations, inspections and issuing certification as stipulated under the Code and Rules in respect of buildings, dangerous machinery, hoists and lifts, lifting tackles, chains, ropes, pressure plants, confined spaces, ventilation system, evaluation of exposure of employees to airborne contaminants and physical agents at the work place, solvent extraction plant and other processes or plants and equipment located in a factory:

Provided that such a person possesses the required qualifications, experience and other facilities, equipment etc., as set out in the notification.

and

In case of an institution, the institution shall be equipped with persons possessing the required qualifications and experience as prescribed in notification and also the facilities, equipment, etc., for carrying out the tests, examinations and inspections.

3. The scheme mentioned in sub-rule (1) shall include-

(i) Type of machinery/equipment;
(ii) Nature of testing or examination;
(iii) Periodicity of testing or examination;
(iv) Eligibility criteria to conduct testing or examination;
(v) Fees for such testing or examination;
(vi) Facilities / Arrangements / Appliances under the command & disposal of applicant for such testing and Examination ;

3. Notified person shall issue the certificate of testing or examination in the prescribed form within the specified timelines

4. No construction, plant, machinery, equipment, Appliance etc for which the testing and examination has been prescribed through the scheme vide subrule(1) above, shall be allowed or required to operate or use without holding a valid certificate issued by empaneled competent person.

145. Information required by the Inspector cum facilitator

The occupier, owner or manager of factory shall furnish any information that an Inspector cum facilitator may require for the purpose of satisfying himself whether any provision of this Code & Rules has been complied with or whether any order of an Inspector cum facilitator has been duly carried out. Any demand by an Inspector cum facilitator for any such information, if made during the course of an inspection, shall be complied with forthwith if the information is available in the factory, or, if made in writing, shall be complied with within seven days of receipt thereof.

146. Availability of registers etc, for inspection

The registers, records and notices maintained and exhibited under the provisions of these rules shall always be available at or as near as practicable to the site of employment and shall be produced or caused to be produced for inspection at all reasonable hours by any Inspector cum facilitator having jurisdiction over the factory.

147. Service of Notices

The dispatch by post under registered cover of any notice or order to any person shall be deemed sufficient service of such notice or order.

CHAPTER -XVI

SPECIAL RULES APPLICABLE TO FACTORIES & BOC WORKS

148. Supply of Personal Protective Equipment and Clothing

1) Save as otherwise expressly provided for in these rules, suitable personal protective equipment and clothing, such as helmets, goggles, respirators, aprons, leggings, boots or other foot wear, gloves, and clothing shall be supplied to workers engaged in any activity , operation or process during the course of his work in the factory which is likely to be injurious to the health and safety of the workers.

2) The inspector may having regard to the nature of the hazards involved in work and process being carried out, order the Occupier or the Manager in writing to supply to the workers exposed to particular hazard any personal protective equipment as may be found necessary.

3) The Personal Protective Equipment provided shall confirm to the relevant National Standard. The occupiers shall require the workers to use such PPEs and same shall be maintained in proper working conditions by the occupier. No charge what so ever shall be charged by the occupier from the workers for provision of such PPE.

4) Without prejudice to the generality of the provisions of sub rule (1), the various types of PPEs to which this rule shall extend for use in factories shall be as prescribed below,

(i) **Safety Helmet:** All workers who are likely to be exposed to any hazard which may cause head injury shall be provided with safety helmets confirming to relevant National standards. All the workers shall be adequately trained on proper use of such PPEs. When work at height is being carried out such safety helmet shall be provided with nape strap. No safety helmet which has resisted an impact shall be reused, Periodic cleaning and visual inspection to check any deformation in size or shape shall be carried out.

(ii) **Protective Footwear:** Protective footwear should be provided to workers who are exposed to hazards which are likely to cause injury to them by way of materials being dropped on their feet or nail or other sharp objects penetrating their sole. The type and nature of footwear to be used at work places shall be decided by the occupier based on nature of work being carried at such work places. Proper disinfection shall be carried out to prevent contagious fungal infection of the skin that causes scaling, flaking and itching of the affected areas. Proper medical care shall be carried out to prevent workers from suffering from ingrown nails, metatarsalgia, heel spur, hammer toes and nerve damage after wearing safety shoe.

(iii) **Safety Googles and Spectacles:** The relevant **National Standard** shall be applicable for eye-protection intended for use in industrial undertakings to provide protection for the eyes of the workers against hazards such as flying particles and fragments, splashing materials and molten metal's harmful dust, gases or vapours, aerosols and radiations which are likely to impair vision or damage the eyes. Additional eye protection over their prescription lenses shall be used ensuring that the protective eyewear does not disturb the proper positioning of the prescription lenses.

iv. **Equipment for Eye and Face Protection during Welding :**Relevant **National Standard** shall be followed for the requirements of goggles, hand shield and helmet intended to protect an operator above the shoulder from harmful radiation, spark and particles of hot metal during welding, cutting and similar operations employing gas flame or electricarc.

v. **Gloves and Protective Clothing:** Suitable gloves, leather gauntlets and mittens conforming to relevant National Standard shall be used for protection of hand of the workers from gettinginjured.Suchprotectivegloves shallbeprovidedwherethehandsareexposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations ;severe abrasions;punctures;chemicalburns;thermal burns; and harmful temperature extremes. Suitable protective clothing as per relevant **National Standard** available for apron (Rubberized, acid and alkali resistant) shall be used for protection of workers who are likely to be exposed to any hazard which may cause injury to theirskin.

vi. **EarProtectionwhenexposedtoNoise:** Protection against the effects of noise exposure shall be provided when thesoundlevelsexceedtheprescribedstandards.Therelevant**NationalStandard**

shall be followed while selection of suitable ear protection. Periodicdisinfection of reusable ear protectors shall be carried out to maintain hygiene.

vii. **RespiratoryProtection:** Respiratory Protective equipment based on the nature of hazard as per therelevant **National Standard** shall be provided by the occupier of the factory to the workers for their respiratory protection against dust,fumes,gases,particulates etc. Periodicdisinfection of reusable appliances shall be carried out to maintain hygiene

viii. **OtherProtectiveEquipment**: Jackets made with reflective or otherwise conspicuouslyvisible material asper the relevant **National Standard** shall be provided to the persons employed in the areas where there is regular exposure to danger from movingvehicles in the nights.

FORM-I

Application for Registration for existing establishments/New Establishment/Amendment to certificate of Registration

A. Establishment Details.

1. Retrieve details of Establishment through LIN:
2. Name of Establishment:
3. Location and Address of the Establishment:
4. Others details of Establishment:
   (a) Total Number of employees engaged directly in the establishment:
   (b) Total Number of the contract employees engaged:
   (c) Total Number of Inter-State Migrant workers employed:

5 (a) For factories:

Details of the manufacturing process	Full postal address and situation of the factory along with plan approval details	Name and address of the occupier and manager	Maximum number of workers to be employed on any day
1	2	3	4

5 (b) For mines:

Name of Mineral(s)	Lease extent of the mine (in Acres)	Name and addressof the owner	Average Monthly output, targeted (Tonne)	Maximum number of persons to be employed on any day
1	2	3	4	5

5 (c) For Dock work:

Name of dockWork / Major Port	Types of Dock Works	Name of the Cargo handled and stored along with quantity	Name of the chemicals handled and stored along with quantity	Name of the hazardous chemicals handled and stored along with quantity
1	2	3	4	5

5 (d) For building and other construction work:

Type of Construction work	Probable period of commencement of work	Expected period for completion of work	Details of approval of the local authority
1	2	3	4

6. Ownership Type/Sector:
7. Activity as per National Industrial Classification:
8. Details of Selected NIC Code:

9. Identification of the establishment e-sign/ digital sign of employer/ representative:

B. Details of Employer:-

1. Name & Address of Employer / Occupier / Owner/Agent/ Chief Executive/ port authorityetc :
2. Designation :
3. Father‘s/ Husband‘s Name of the Employer :
4. Email Address, Telephone& Mobile No :

C. Manager/ Agent Details

1. Full name & Address of Manager/ Agent or person responsible for supervision and control of theEstablishment
2. Address of Manager/ Agent:
3. Email Address, Telephone& Mobile No :

D. Contractor Details

Name and Address Contractor	Email address& Mobile of Contractor	Name of Work	Maximum No. of Contract labour engaged	Date of Commencement / Probable date of Completion of work
1	2	3	4	5

E. Others Details:-

Signature/ E-sign/digital sign of employer

Dated:-

Place;-

FORM-II

Certificate of Registration of Establishment

Registration No. Date:

A Certificate of registration containing the following particulars is hereby granted under sub section (2) of section 3of theOccupational Safety, Health and Working Conditions Code, 2020

to .....(Name of the establishment)

1. Nature of work carried on in the establishment (Please tick mark)
    (a) Factory
    (b) Mining
    (c) Dock Work
    (d) Contract Work
    (e) Building and Other Construction Works
    (f) any other work (not covered above)
2. Details of the establishment:
    (a) Total Number of employees engaged directly in the establishment:
    (b) Total Number of the employees engaged through contractor ……..
    (c) Total Number of Contractors and their details:
    (d) Number of inter-state migrant workers engaged:

3 (a) For factories

Details of the manufacturing process	Full postal address and situation of the factory along with plan approval details	Name and address of the occupier and manager	Maximum number of workers to be employed onany day
1	2	3	4

3 (b) For mines

Name of Mineral(s)	Lease extent of the mine (in Acres)	Name and address of the owner	Average Monthly output, targeted (Tonne)	Maximum number of persons to be employed on any day
1	2	3	4	5

3 (c) For Dock work

Name of Dock Work / Major Port	Types of Dock Works	Name of the Cargo handled and stored along with quantity	Name of the chemicals handled and stored along with quantity	Name of the hazardous chemicals handled and stored along with quantity
1	2	3	4	5

3 (d) For building and other construction work

Type of Construction work	Probable period of commencement of work	Expected period for completion of work	Details of approval of the local authority
1	2	3	4

4. Amount of registration fee paid…..
5. Remarks of registering officers

/Signature E -Sign/DSC of Registering Officer

along with designation

Place:Date:

Conditions of Registration

(1). Every certificate of registration issued under rule 4 shall be subject to the following conditions, namely:(a).

the certificate of registration shall be non-transferable;

a. the number of workers employed in an establishment directly and contract employees shall not, onany day, exceed the maximum number specified in the certificate of registration; and

b. Save as provided in these rules, the fees paid for the grant of registration certificate shall be non-refundable.

2. The employer shall intimate the change, if any, in the number of workers or the conditions of workto the registering officer within 30 days

3. The employer shall, within thirty days of the commencement and completion of any work, intimate to the Inspector-cum-Facilitator, having jurisdiction in the area where the proposed establishment or as the case may be work is to be executed, intimating the actual date of the commencement or, as the case may be, completion of establishment such work in **Form IV** annexed to these rules electronically.

4. A copy of the certificate of registration shall be displayed at the conspicuous places at the premises where the work is being carried on.

FORM-III

Register of Establishment

SI. No.	Nature of work	Registration No. and Date	Name and Address, location of the establishment registered	Name, Address and Contact Details of Employer	Total number of Workers and Total Horsepower (if any)	Total number of contract Workers	Remarks
1	2	2	3	4	5	6	
	(a) Factories (b) Mines (c) Dock Work (d) Building and other Construction work (e) Contract work (f) Interstate Migrant Work (g) Any other work (not covered above)						

FORM-IV

Notice of Commencement / cessation of Establishment:

1. Registration No:
2. Name and Address of Establishment:-
3. Name & Designation of employer/ Port authority (who has ultimate control over the affairs of the establishment :-
4. Full address to which communication relating to the establishment to be sent :-
5. Nature of work of the establishment :-
6. In case of the notice is for commencement of work the approximate duration of work:-
7. in case of cessation, the date of cessation:

I/We hereby intimate that the work of establishment having registration No. ……..dated ..... is likely to commence/cessation is likely to be completed with effect from …… (Date)/ On .....(Date)

In case of cessation of work:

I/we hereby certify that the payment of all dues to the workers employed in the establishment have beenmade and the premises are kept free from storage of hazardous chemicals and substances.

Signature of the Employer

To,

The Inspector-cum-Facilitator

FORM-V

Proforma for medical examination by a qualified medical practitioner:

Question **A. Demographics:**	Answer	Remarks
Date:		
Name of the Worker:		
Age:		
Permanent Address:		
Gender:		
Total Number of family Members:		
Total monthly family Income:		
Is the employee under ESI (Employees' State Insurance) Scheme? If yes, provide IP Number.	Yes/No	
Is the employee under any other health scheme apart from ESI-Scheme? (If yes, provide the name of the scheme)	Yes / No	

B. **Occupational History**

Question	Answer	Remarks
Present Designation:		
Work Profile:		
Duration of service in the present work profile:		
Working Hours per shift:		
Night Shift Per Week:		
Night Shift per Month:		

C. Brief Review of Medical History: Diagnosed previously or currently under treatment or Currently suffering from

Question	**Answer (Yes/No)**	**Remarks**
Anaemia		
Jaundice		
Asthma		
COPD		
History of Any other Lung Disease: (If Yes, Please Specify)		
Vertigo/Dizziness		
Diabetes Mellitus		
Hypertension		
Any Cancer (If Yes, Please Specify the Cancer)		
Chronic Low Back Pain		
Chronic Pain in hand or Elbow		
Hernia		

Hydrocele		
Varicose Vein		
Haemorrhoids		
History of amputation/fracture/dislocation injury during work (If Yes, please specify)		
Dermatitis (If Yes, specify Site)		
Hearing Impairment		
Visual Impairment		
Any Major Illness requiring hospitalization in last 1 year (If Yes, Name of the Disease)		
Occupational Injury in Last 1 year: if yes Specify the Location of injury and frequency		

D. **Current Symptoms-Diseases Module**

Question	Answer (Yes/No)	Remarks
Smoking habit		
Chewing Tobacco or Pan Masala or Gutkha:		
Alcohol Addiction		
Dermatosis (Irritant Contact Dermatitis/Eczema/Chloracne/Allergic Contact Dermatitis):		
Mucosal Irritation of eyes/Nose/Throat with response to chemical agent or biological agent:		
Symptoms like Respiratory Difficulty/ Chest Tightness/ Dry Cough at beginning of shift:		
Currently suffering from TB:		
Jaundice or Hepatitis:		
Currently suffering from Low Back Pain		
Currently suffering from Pain in hand or Elbow:		
Currently suffering from Visual Problems		
Currently suffering from Hearing Problems		
Any current injury (amputation/ fracture/ dislocation)		
Any current musculoskeletal sprains/ strains		

E. **Physical Examination**

Date of Examination:

Question	Answer (Yes/No) or as appropriate	Remarks
General Skin Condition: (If Any Dermatitis, please mention its location)		
Weight (in Kg):		
Height (in Meter)		
Temperature (^{0}F):		
BP:		

Pulse:		
SpO2:		
Respiratory Rate:		
Examination of Breast of female-employee		

F. **Investigation Report**

- **Routine Blood Investigation: Attach the photocopy of the report**
- **Blood Grouping & Rh Typing and HB Electrophoresis Once in a lifetime**

Parameter	**Answer (Normal/Increase/Decrease)**	**Value**
Hb%:		
Total WBC Count and Differential Count:		
Platelet Count:		
ESR:		
FBS:		
PPBS:		
HBA1C level		
BUN:		
Creatinine:		
Total Protein		
Albumin		
Globulin		
SGOT		
SGPT		
Bilirubin		
Urine RE		
Urine ME		
Prostate Specific Antigen (PSA)		

G. Standard Chest X Ray (PA) View: attach the photocopy of the report

Date:

Parameter	Answer (Normal/Abnormal)	Value (if any importance)
Report		

Report:

H. Spirometry: attach the photocopy of the report (For mine employee)

Date:

Parameter	Answer (Normal/Increase/Decrease)	Value
PEFR:		
FEV_1:		
Observed:		

Predicted:		
FVC:		
Observed:		
Predicted:		
FEV_1/FVC:		
Final Report: Normal / Obstructive Lung Disease/ Restrictive Lung Disease/ Mixed Lung Diseases		

I. Audiometry (Pure Tone / BERA): attach the photocopy of the report (For Mine Employee)

Date:

Parameter	Value/Result/Interpretation
Visual inspection of Eye for any abnormality like wax in external ear, infection etc	
Right Ear Hearing Threshold:	
Left Ear Hearing Threshold:	
Final Report preferable based on BERA:	
Right Ear:	
Left Ear:	

J. Eye Examination: attach the photocopy of the report

Date:

Parameter	Value/Result/Interpretation
Visual inspection of Eye for any abnormality like corneal opacity/scaring, cataract etc.	
Visual Acuity: Right	
Visual Acuity: Left	
Colour Vision	
Field of Vision	
Binocularity	
Lateral Phoria	
Vertical Phoria	
Stereoscopic Vision and Depth Perception Testing	
Fundus (Retina) examination	

K. 12 lead ECG and Echocardiography:

Final Report:

L.* MEDICAL FITNESS TESTS FOR PERSONS WORKING AT HEIGHT *(as may be applicable):

1. Detailed Medical History and in-Depth General Medical Examination including tests for Vision, Hearing, Musculoskeletal System, Respiratory System, Cardiovascular System etc.

As applicable to all employees

2. Special Examination

a) Cardiovascular

Uncontrolled hypertension or ischemic heart disease will be a contraindication. In the presence of hypertension andabnormal ECG findings, the employee should be referred to a Cardiologist for fitness.

b) Tests for Labyrinthine functions and for sense of position Eye Examination for Bilateral Nystagmus, Romberg sign.The presence of bilateral nystagmus and a positive Romberg sign will be an absolute contra-indication.
c) Neurological examination Evaluate seizure disorders: CT Scan of Brain and E.E.G if indicated

d) Assessment of Diabetic Control Status:

(in case of employees suffering from Diabetes Mellitus)

e) Assessment of Phobia (Acrophobia) and any other Mental Health Disorder like Anxiety or Depression

d) Evaluation for Vertigo and Dizziness

For use of Industrial Safety Section:

Walking freely over a horizontal bar at 1 ft. height: PASS /
FAILWearing a safety belt and tying the rope knot: PASS/
FAIL

Walking over a horizontal structure at 9 ft. height wearing a belt: PASS/
FAILGeneral physique (O.K./NOT O.K): PASS/ FAIL

M. Any other information/examination/biological investigation/test as mutually agreed by the employer andqualified medical practitioner.

FORM-VI

NOTICE OF ACCIDENT OR DANGEROUS OCCURRENCE

E.S.I.C. Employer's Code number : E.S.I.C. Insurance

Insurance Number of the injured person :

1. Name of employer :

2. Address of works / premises where the accident or Dangerous occurrence took place :

3. Nature of industry and LIN of establishment :

4. Branch or department and exact place where the accident or dangerous occurrence took place :

5. Name and address of the injured person :

   i. Employees State Insurance Number (if covered) :

6. (a) Sex :

   (b) Age (at the last birthday) :

   (c) Occupation of the injured person :

7. Local E.S.I.C. Office to which the injured person is attached :

8. Date, shift and hour of accident or dangerous occurrence :

9. (a) Hour at which the injured person started work on the day of accident or dangerous occurrence :

   (b) Whether wages in full or part are payable to him for the day of the accident or dangerous occurrence :

10. (a) Cause or nature of accident or dangerous occurrence :

    (b) If caused by machinery- :

        (i) Give the name of machine and the part causing the Accident or dangerous occurrence :

        (ii) state whether it was moved by mechanical power at the time of accident or dangerous occurrence :

    (c) State exactly what the injured person was doing at the time of accident or dangerous occurrence :

(d) In your opinion, was the injured person at the time of accident or dangerous occurrence – :

(i) acting in contravention of provisions of any law applicable to him; or :

(ii) acting in contravention of any orders given by or on behalf of his employer; or :

(iii) acting without instructions from his employer? :

(e) In case reply to (d) (i), (ii) or (iii) is in the affirmative, state whether the act was done for the purpose of and in connection with the employer‘s trade or business :

11. In case the accident or dangerous occurrence took place while travelling in the employer‘s transport, state whether :

(a) the injured person was travelling as a passenger to or from his place of works; :

(b) the injured person was travelling with the express or implied permission of his employer; :

by or on behalf of the employer or some other person by whom it is provided in pursuance of arrangements made with the employer; and :

(c) the transport is being operated :

(d) the vehicle is being/not being operated in the ordinary course of public transport service :

12. In case the accident or dangerous occurrence took place while meeting emergency, state- :

(a) its nature; and :

(b) whether the injured person at the time of accident or dangerous occurrence was employed for the purpose of his employer‘s trade or business in or about the premises at which the accident or dangerous occurrence took place :

13. Describe briefly how the accident or dangerous occurrence took place: :

14. Names and addresses of the witnesses :

(1) :

(2) :

15. (a) Nature and extent of injury (e.g. fatal, loss of finger, fracture of leg, scald, scratch followed by sepsis, etc.) :

(b) Location of injury (e.g. right leg, left hand, left eye, etc.) :

16. (a) If the accident or dangerous occurrence was not fatal, state whether the injured person was disabled for more than 48 hours :

(b) date and hour of return of work :

17. (a) Physician, dispensary or hospital from whom or which the Injured Person received or is receiving treatment

(b) Name of dispensary/panel doctor elected by the injured person :

18. (a) Has the injured person died? :

(b) If so, date of death :

I certify that to the best of my knowledge and belief the above particularsare correct in every respect.

Date of dispatch of report :
Place:

Signature and Name and Designation of Occupier /Employer / Manager

FORM-VII

(See Rule -57)

TICE OF PERIODS OF WORK

Name of the Establishment……Place……District……

Periods of work Groups, Relays	Men												Women												Description of Groups, Nature of work	Remarks
	Total no. of men employed												Total no. of women employed													
	A			B			C			D			E			F			G			H				
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		

On working days
From ..
To ..
From ..
To ..
From ..
To ..
On partial

Working days
From ..
To ..
From ..
To ..

Date on which this notice is first exhibited : Signature of manager or agent
:Date :

FORM-VIII

(See Rule-58)

REGISTER OF WORKERS EMPLOYED IN AN ESTABLISHMENT, WAGES, OVERTIME, FINE,DEDUCTION FOR DAMAGE OR LOSS

Register of Wages, Overtime, Fine, Deduction for damage and Loss

Name of the Establishment: Name of the Employer:
Name of the Owner: PAN/TAN of the Employer:

Labour Identification Number (LIN):

Sr. no. in Employee Register	Name of the employee	Designation / Department	Duration of Paymentof Wages (Monthly/Fortnightly /Weekly/Daily/Piece rated)	Wage Period From-To	Total no. of days worked during the period	Total overtime (hoursworked or productionin case of piece workers)	Rates of wages		
							Basic	DA	Allowances
1	2	3	4	5	6	7	8	9	10

Overtime earning	Nature of acts and omissions for which fine imposed with date	Amount of fine imposed	Damage or loss caused to the employer by neglect or default of the employee	Amount of deduction from wages	Total amount of wages paid	Date of Payment	Attendance	
							Date	Signature
11	12	13	14	15	16	17	18	19

FORM-IX

(SEE RULE -60) ANNUAL RETURNS

UNIFIED ANNUAL RETURNSFROM FOR THE YEAR ENDING

Single Integrated Return to be filed On-line under the Occupational Safety, Health and Working Conditions Code, 2020,the Code on Industrial Relations, 2020, the Code on Social Security , 2020, and the Code on Wages, 2019

Instructions to fill up the Annual Return

(1) This return is to be filled-up and furnished on or before 28th or 29th February every year.

(2) The return has two parts i.e. Part-I to be filled up by all establishments.

(3) Part-II to be filled-up by the establishments who are a Mine only in addition to Part-I.

(4) The terms Establishment and Mines shall have the same meaning as under the Occupational Safety, Health and Working Conditions Code, 2020.

(5) This return is to be filled-up in case of Contractor or manpower supplier who have engaged more than 50 workers and in case of Mines even if there is one worker employed in the relevant period.

Applicable to All Establishments - Part-I

A. General Information:

Sl. No.			**Instructions for filling the column**
1.	Labour Identification Number		EPFO, ESIC, MCA, MoLE (LIN)
2.	Period of the Return	From - To-	Period should be calendar year
3.	Name of the Establishment		
4.	Email ID		
5.	Telephone No.		
6.	Mobile number		
7.	Premise name		
8.	Sub-locality		
9.	District		
10.	State		
11.	Pin code		
12.	Geo Co-ordinates		
B(a).	**Hours of Work in a day**		
B(b).	**Number of Shifts**		

C. Details of Manpower Deployed

Details	**Directly employed**				**Employed through Contractor**				**Grand Total**
Skill Category	**Highly Skilled**	**Skilled**	**Semi-Skilled**	**Un-Skilled**	**Highly Skilled**	**Skilled**	**Semi-Skilled**	**Un-Skilled**	
(i) Maximum No. ofemployees employed in the establishment in any day during the year	Male	Female	Transgender	Total	Male	Female	Transgender	Total	
(ii) Average No. ofemployees employed in the establishment during theyear	Male	Female	Transgender	Total	Male	Female	Transgender	Total	
(iii) Migrant Worker out of (ii) above	Male	Female	Transgender	Total	Male	Female	Transgender	Total	
(iv)Number of fixed term employee engaged	Male	Female	Transgender	Total	Male	Female	Transgender	Total	

D. Details of contractors engaged in the Establishment:		
Sl. No.	Name with LIN of the Contractor	No. of Contract Labour Engaged
E. Details of various Health and Welfare Amenities provided.		

Sl. No.	Nature of various welfare amenities provided	Statutory (specify the statute)	Instructions for filling
1.	Whether facility of Canteen provided (as per section 24(v) of OSH Code, 2020)	Tick yes or no in the box	Applicable to all establishments where in hundred or more worker including contract labour wereordinarily employed
2.	Crèches (as per section 67 of Code onSocial Security Code, 2020 and Section 24 of the OSH Code 2020)	Tick yes or no in the box	Applicable to all establishments where fifty or more workers are employed
3.	Ambulance Room (as per section 24(2)(i) of OSH Code, 2020)	Tick yes or no in the box	Applicable to mine, building and other construction work wherein more than five hundred workers are ordinarily employed
4.	Safety Committee (as per Section 22(1) of OSH Code, 2020.	Tick yes or no in the box	Applicable to establishments and factories employing 500 workers or more, factory carrying on hazardous process and BoCW employing 250 workers or more, and mines employing 100 or more workers.
5.	Safety Officer (as per section 22(2) of OSH Code, 2020)	No. of safety officers appointed	In case of mine 100 or more workers and in case of BoCW 250 or more workers are ordinarily employed.
6.	Qualified Medical Practitioner (as per Section 12 (2) of OSH Code 2020.	No. of Qualified Medical Practitioner appointed.	There is no specification for minimum number of Qualified Medical Practitioner employed in establishment. However, this detail is required to have data on occupational health.

F. The Industrial Relations:			**Instructions for filling**
1.	Is the Works Committee has been functioning. (section 3 of IR Code, 2020)	Yes/No	Industrial establishment in which 100 or more workers are employed
(a)	Date of its constitution.		
2.	Whether the Grievance Redressal Committee constituted (section 4 of IR Code, 2020)	Yes/No	Industrial establishment employing 20 or more workers are employed
3.	Number of Unions in the establishments.		
4.	Whether any negotiation union exist (Section 14 of IRCode, 2020)	Yes/No	
5.	Whether any negotiating council is constituted (Section 14 of IR Code, 2020)	Yes/No	
6.	Number of workers discharged, dismissed, retrenched or whose services wereterminated during the year:		

Discharged	**Dismissed**	**Retrenched**	**Terminated or Removed**	**Grand Total**

7.	**Man-days lost during the year on account of**				
Sl. No.	Reasons	Period / Date	No. of man-days lost	Loss in term of money	

(a)	Strike				
(b)	Lockout				
8.	**Details of retrenchment / lay off**				
Sl. No.	No. of persons retrenched during the period	Details of payment paid to retrenched employees	No. of workers laid off during the period	No. of man-days lost due to lay-off	

G. Details pertaining to maternity benefit:				
No. of female employees	No. of female employees availed maternity leave	No. of female employees paid medical bonus	No. of deduction of wages, if any made from female employees	

H. Details of payment of bonus:			
Sl. No.	No. of employees covered under the Bonus provision	Total amount of bonus actually paid	Date on which the Bonus paid

I. Details of accidents, dangerous occurrence and notifiable diseases:				
Sl. No.	Total number of accidents by which a person injured is prevented from workingfor a period of 48 hours or more as per Section 10 of the OSH Code, 2020.	Total number of fatal accidents and names of the deceased as per Section 10 of the OSH Code, 2020.	Total number of Dangerous Occurrences as defined underSection 11 of the OSH Code, 2020	Total number of casesof Notifiable Diseases specified in Third Schedule of the OSH Code, 2020 along with the details of affected persons

J. Mandays and Production Lost due to accidents / dangerous occurrence			
Sl. No.	**Accident/Dangerous Occurrence**	**Mandays lost**	**Production Lost**

ANNUAL RETURN FORM IN CASE OF MINES ONLY, Part II

Annual Returns for the year ending on the 31st December……

1. Particulars of the mine

(i)	Type of organization*	
(ii)	Type of ownership**	
(iii)	Company name/ Owner name	
(iv)	Type of mineral #	
(v)	Name of mineral	
(vi)	Type of mine##	
(vii)	Degree of gassiness***	

(viii)	Depth of working (Select for different workings)	
(ix)	Date of opening	
(x)	Date of closing (if any)	
(xi)	Date of reopening (if any)	

ote: * Mention: PSU Central/ PSU State /Private; ** Mention: firm/Association/Individual/

Company; *** Mention: I or II or III or NA; # Mention: Coal/Metal/Oil; ## Mention: Below Ground/OpenCast/ Above Ground/On Shore/Off Shore.

2. Statutory personnel employed in the mine

Sl. No.	Designation#	No. Required	No. Available	Shortage/ Surplus

 # Select Designation of all officials as mentioned in the respective Regulations

3. Employment Details (Each mine to fill only one table as per the Type of mine; Table A to be filled byCoal Mines, Table B to be filled by Metal Mines, Table C to be filled by Oil Mines)

Table A: Coal Mines

Classification	Departmental												Contractual												Total											
	No. Of persons employed (on roll ason 31st December				Total mandays worked				Average daily number of persons employed				No. Of persons employed (on roll as on 31st December				Total mandays worked				Average daily number of persons employed				No. Of persons employed (on roll as on 31st December				Mandays worked (Departmental+ Contractual)				Average Daily Employment (Departmental + Contractual)			
	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
(a) Underground																																				
Officers																																				
2.Overmen and Sirdars including Electrical and Mechanical supervisors																																				
3. Workers																																				
4. Others																																				
5. Undergr ound Total {a(1)+a(2)+a(3)+a(4)+a(5)}																																				
6. Maximum no. Of persons including contractual employees employed on any one day during the year …….																									Date:_____				No. Of Persons:_____							
a). Opencast																																				
1 Officers																																				

2.Overmen and Sirdars including Electrical and Mechanical Supervisors																																						
3. Workers																																						
4. Others																																						
5. Opencast Total {b(1)+b(2)+b(3)+b(4)+b(5)}																																						
6. Maximum no. Of persons including contractual employees employed on any one day during the year …….																										Date:_____									No. Of Persons:_____					
(b). Aboveground																																						
1.Officers																																						
2.Clerical and Supervisory Staff																																						
3.Others																																						
4.Above ground Total {c(1)+c(2)+c(3)+c(4)}																																						
5. Grand Total {a(6)+b(6)+c(4)}																																						
6. Maximum no. Of persons including contractual employees employed (Underground +Opencast + Above ground) on any one day during the year …….																										Date:_____									No. Of Persons:_____					

Table B: Metalliferous Mines

Classification	**Departmental**												**Contractual**												**Total**											
	No. Of persons employed (on roll as on 31st December				Total mandays worked				Average daily number of persons employed				No. Of persons employed (on roll as on 31st December				Total mandays worked				Average daily number of persons employed				No. Of persons employed (on roll as on 31st December				Mandays worked (Departmental+Contractual)				Average Daily Employment (Departmental + Contractual)			
	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
(a) Underground																																				
Officers																																				
2. Mine Foreman, Mining Mate, Blaster, Electrical and Mechanical supervisors																																				
3. Workers																																				
4. Others																																				
5. Undergroud Total {a(1)+a(2)+a(3)+a(4)+a(5)}																																				
6. Maximum no. Of persons including contractual employees employed on any one day during the year …….																										Date:_____									No. Of Persons:_____			
(a). Opencast																																				
1 Officers																																				
2.Mine foreman, Mining Mate, Blaster, Electrical Supervisor and Mechanical Supervisor																																				

3. Workers																																			
4. Others																																			
5. Opencast Total {b(1)+b(2)+b(3)+b(4)+b(5)}																																			
6. Maximum no. Of persons including contractual employees employed on any one dayduring the year …….																									Date:_____						No. Of Persons:_____		

(a).Aboveground																																			
1.Officers																																			
2.Clerical and Supervisory Staff																																			
3. Workshop/Plant (including workers in any attached Factory)																																			
4.Others																																			
5.Above ground Total {c(1)+c(2)+c(3)+c(4)}																																			
7 **Grand Total {a(6)+b(6)+c(5)}**																																			
6. Maximum no. Of persons including contractual employees employed (Underground +Opencast + Above ground) on any one day during the year …….																									Date:_____						No. of Persons:_____			

Table C : Oil Mines

Classification	Departmental												Contractual												Total											
	No. of persons employed (on roll as on 31st December				Total mandays worked				Average daily number of persons employed				No. of persons employed (on roll as on 31st December				Total mandays worked				Average daily number of persons employed				No. of persons employed (on roll as on 31st December				Mandays worked (Departmental+Contractual)				Average Daily Employment (Departmental + Contractual)			
	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total	Male	Female	Transgender	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)
(a) On-shore																																				
1. Officer																																				
2. Supervisors																																				
3. Drilling services																																				
4. Work over/ Well Services																																				
5. Fire Service																																				
6. Others																																				
7. Grand Total																																				
8. Maximum no. of persons including contractual employees employed on any one day during the year ……..																									Date:_____						No. of Persons:_____			
(a) Off-shore																																				
1.Supervisors																																				
2. Clerks																																				
3. Drilling																																				
4. Officer																																				

5.Production																																			
6. Engineering services																																		
7.Fire Service																																		
8.Workover/ Well Services																																		
9. Others																																		
10.Grand Total																																		
11. Maximum no. of persons including contractual employees employed on any one day during the year …….																								Date:_____						No. of Persons:_____				

4. Production of Mineral & Material Handled etc. (Each mine to fill only one table as per the Type of mine;Table A to be filled by Coal Mines, Table B to be filled by Metal Mines, Table C to be filled by Oil Mines)

Table A : Coal Mines

Figure in tonnes																					Material handled in Cubic metre		
Mineral produced	Opening Stock on 1st Jan.	Coal Raised during the year													columns (2)+ (16)	Coal Dispatched	Internal Consumption	Closing stock on 31st December [(17) -(17+19)]	Value of Output (In Rupees)	Coal Produced	Overburden/Stone, debris, etc handled	otal material handled , (22) + (2
		Underground									Opencast	From other Sources	Sub Total of (11)+ (13)+ (14)									
		Board & Pillar Method				Method other than Board & pillar (specify methods……)		Mechanisation	Semi Mechanisation	Manual	Sub Total (3 to 12)											
		Development	Depillaring		Splitting As Final Operation	Development.	Extraction	Fully Mechanised(Longwall, Shortwall and Continuous Miner)	Semi mechanised (other than longwall, shortwall , Continuous Miner)													
			Caving	Stowing																		
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
*																						
*																						

* Mention mineral: coal or lignite

Table B: Metalliferous Mines

Mineral Raised	Opening Stock on 1st Jan.		Output of the mineral during the year				Dispatches		Closing stock on 31st December		Metal extracted if any				Value of Mineral Produced	Material handled in Cubic metre		
	Run of Mine (ROM)	Processed Mineral	Run of Mine (ROM)			Processed Mineral	Run of Mine (ROM)	Processed Mineral	Run of Mine (ROM) {Col 2+4+5-8}	Processed Mineral { Col3+7-9}	Name	Quality	Unit	Value		Mineral Produced	Overburden/Stone, debris, etc handled	Total material handled, (17) + (18)
			Below ground	Opencast	Total													
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)

Table C: Oil Mines

Item No.	Type of Product	Opening Stockon 1st Jan	Production	Values (in Rupees)	Dispatches			Closing Stock as on 31st Dec
					To Refinery	To market	For in-house Consumption	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	Oil (in Metric Tonnes)							
2.	Gas (in Metric Tonnes)							

3. Explosive used:

Consumption of explosives		Underground	Opencast	Total
(a)	Permitted explosives (Kg)			
(ii)	Non-Permitted explosives (Kg)			
(iii)	Total (i+ii)			
(iv)	Detonators (in Nos.)			

4. Machinery and Equipment

a. Aggregate horse-power of machinery and equipment installed in the mine

Place	Electrical operated machinery (KW/HP)	Oil/Natural gas/steam/any other (KW/HP)	Compressed air operated machinery (KW/HP)	Total (KWHP)
Underground*				
Opencast*				
Aboveground*				
On shore*				
Off Shore*				
Total (HP)				

*- Delete whichever is not applicable

b. Voltage(s) at which electricity is used for lighting and machinery

S.No	Voltage	Installed Capacity(KW)

c. Machinery used in underground mine (for coal & metal mines)

Winding Engine		Man-riding other than winding		Other Transport		Coal/Ore cutting/Ripping/ Shearing		Drilling and Loading Machines		Compressors and Pumping		Conveyors		Mechanical Ventilator (Underground) /Aboveground		Coal Handling/Mineral dressing Plant		Other Machinery		Total	
(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)	
HP.	No	HP	No.	HP	No.	HP	No.	HP	No.	HP	No	HP	No.	HP	No.	HP	No.	HP	No.	HP	No.

*- Delete whichever is not applicable

d. Machinery used in Opencast mine (for coal & metal mines)

Material Transport		Other Transport		Coal/Ore cutting/Ripping/Shearing		Drilling Machines		Loading Machines		Compressors		Conveyors		Pumping		Coal Handling / Mineral dressing Plant (Above ground)		Other Machinery		Total	
(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)	
No.	HP	No.	HP	No.	HP	No.	HP	No.	HP	No	HP	No.	HP	No.	HP	No.	HP	No.	HP	No.	HP

*- Delete whichever is not applicable

5. Details of drilling and other rigs, oil wells and gas wells and pipelines; exploration rigs & workover rigs (for Oil Mines):

a. Drilling and other rigs, oil wells and gas wells and pipelines:

Item No.	Classification	Number of Rigs			Total No. of Rigs in use
		Company Owned	Hired	O & M basis	
1.0	Drilling, workover and other rigs				
1.1	Drilling				
1.2	Workover				
2.0	Oil, gas and other wells				
2.1	Wells drilled				
2.2	Wells abandoned				
2.3	Gas wells completed				
2.4	Oil wells completed				
2.5	Gas wells on production				
2.6	Oil wells on production				
2.7	Oil wells where production discontinued				
3.0	Pipelines	Length (in meters)			Diameter (in meters)
3.1	Flow lines laid from wells to gathering station				
3.2	Pipelines laid from gathering station to central processing & storage tanks				
3.3	Others (specify)				

b. Exploration rigs & Work over rigs

Exploration rigs:				**Workover rigs:**		
Name of the drilling- rig	Date of commissioning	Number of wells drilled during the year	Total meters drilled since its commissioning	Name of the workover rig	Date of commissioning	Description of work done during the year

8.0 Medical Examination & Training

8.1 Initial/periodical medical examination (IME/PME) conducted during the year

Number of persons employed			Number of persons required to undergo IME			Number of persons undergone IME			Number of persons required to undergo PME			Number of persons undergone PME			Number of persons declared medically unfi			Number of persons given special/higher medical treatment		
Depart-mental	Cont-ractua	Tota	Departmenta	Cont-ractua	Total	Departmenta	Cont-ractua	Total	Departmenta	Cont-ractua	Total	Depart-mental	Cont-ractual	Total	Departmenta	Cont-ractual	Total	Department	Contractu	Total

8.2 Occupational diseases

Sl No.	Disease Name	No. of cases	
		Departmental	Contractual
1.	*		
2.	*		
Total			

Note: * *Mention diseases specified under Third schedule of the OSH & WC Code, 2020 connected with mining operations, whichever is applicable.*

8.3 Vocational training imparted during the year

Number of persons employed			Number of persons required to undergo Basic Vocational Training			Number of persons imparted Basic Vocational Training			Number of persons required to undergo Refresher Training			Number of persons imparted Refresher Training			Number of persons imparted special Training		
Depart-ental	Contrac-tual	Total	Depart-ental	Contrac-tual	Tota	Departm-ental	Contrac-tual	Tota	Departm-ental	Contrac-tual	Total	Departm-ental	Contrac-tual	Total	Departm-ental	Contrac-tual	Total

9.0 Accident and Dangerous Occurrence statistics

	Fatal Accidents			Serious Accidents		Reportable Accidents		Minor Accidents		Dangerous Occurrences	
	No. of accidents	No. of persons killed	No. of persons seriously injured	No. of accidents	No. of persons seriously injured	No. of accidents	No. of persons Injured	No. of accidents	No. of persons Injured	No. of Occurrences	Nature of Occurrence#
Underground*											
Opencast*											
Aboveground*											
On Shore*											
Off shore*											
Total											

*- Delete whichever is not applicable; #- Select from List of Dangerous occurrence given in Mines Regulations

10. Safety Management Plan:

A. Review, audit and SOP:

(i) Last date of review of Safety Management Plan:

(ii) Last date of audit of Safety management Plan:

(iii) No. of SOP framed and implemented as per Safety Management Plan:

B. Principal Hazard Management Plan:

Sl. No.	List of principal hazards identified	Principal hazard mitigation date as per Safety Management Plan	Status of principal hazard as on 31st December**	Remarks in case principal hazard has not been mitigated till date with reasons for failure to mitigate the same
1.	*			
2.	*			
3.	*			

Note : Add rows as per requirement; * Mention principal hazards; ** Write –Mitigated‖ or –Not Mitigated‖

11. Mines Rescue Station:

i. Location of the Mines Rescue Station:

ii. Address of the Mines Rescue Station:

iii. Name of the Superintendent of Mines Rescue Station:

iv. Postal address, email ID and Mobile Number of the Superintendent of Mines Rescue Station:

v. Details of equipment/apparatus and personals

Type of equipment/Apparatus provided in Mines Rescue Stations/Mines Rescue Rooms	Number provided	Personals	Number provided
		Superintendent	
		Instructors	
		Rescue brigades	
		Number of Rescue Rooms	
		Rescue room in-charge	
		Number of underground mines served by the rescue station	
		Number of rescue trained persons	
		Number of rescue trained persons given refresher practice	
		Number of rescue trained persons medically examined	

(i) Particulars of emergencies attended:

Certified that the tables in prescribed format are duly filled in and information and/ figures given in all the tables are correct to the best of my knowledge.

Signature of Owner/Agent/Manager with

sealPlace:

Dated:

FORM-X

(See Rule-61)

REGISTER OF ACCIDENTS AND DANGEROUS OCCURRENCES

Name of Injured person(if any)	Date of Accident or dangerous occurrence	Date of report to Inspector- cum-Facilitator	Nature of accident or dangerous occurrence	Date of return of injured Person to work	Number of days the injured Person was absent from work
1	2	3	4	5	6

FORM-XI

[See Rule-62]

REGISTER FOR LEAVE WITH WAGES

Part I - Adults

Part II - Adolescents

Establishment: Name of worker :

Department : Father's Name:

Sl. No	Sl.no. in the register of workers	Date of entry into service	Interruptions					Leave due with effect from	Whether leave not desired during the next 12 months	Date from which the worker is allowed leave	Wages for Leave Paid in	Discharged worker		Remarks
			Sickness and accidents	Authorized Leave	Lock Out or Legal Strike	Involuntary unemployment	Others					Date of Discharge	Date & amount of payment made in lieu of leave due	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Note:- Separate page shall be allotted to each worker

FORM-XIII

(Under Rule-71 and 72)

APPLICATION FOR LICENSE

On Line Application for License/ Renewal of License/Amendment of License (including Common/single license)
Government of India, Ministry of Labour and Employment
ESTABLISHMENT PROFILE:
Labour Identification Number Date
Acknowledgement Number: **……** Date of Application: **…….**
I. Particulars of Establishment for which licence required:
1. Name of Establishment:
2. Address of establishment
(a) Head Office address along with email Id :
(b) Corporate office address along with email Id:
3. Telephone Number :
4. Activity as per National Industrial Classification : (Select all applicable activities given)
5. Details of selected NIC Code:
6. Nature of work carried on in main establishment :
7. Identifier of the Establishment : (Select) : esign/digital sign
II. Details of Employer:
1. Full Name of Employer.....relationship with establishment.
2. Full Address of Employer:

3. Email Id of employer:
4. Mobile No. of employer:
III. Particulars of the Contract Labour to be employed / is employed (If licence is required work wise)

Locations of worksites	Name of works	Activity as per national industrial classification	Date of commencement	Date of completion	Name of Establishments in which contract labour is/proposed to be employed	Name Address, email id of the Site Incharge
1	2		3	4	5	6
5. Maximum number of workmen proposed to be employed on the Establishment on any date: **24**						
6. Amount of Licence Fee: **INR** **(Transaction Id :)**						
7. Amount of Security Deposit: **INR** **(Transaction Id :)**						
IV. DETAILS OF ESTABLISHMENTS FOR WHICH COMMON LICENCE REQUIRED , (IF APPLYING FOR)						

Type of Establishments	Name & Address of establishment	(i)Nature of work carried out in the establishment (ii) Activity as per National Ind'l classification	Date of commencement	Permanent establishment or probable date of completion	Maximum number of employees employed/ proposed to be employed	Maximum number of employees employed/ proposed to be employed
1	2	3	4	5	6	7

V. DETAILS OF ESTABLISHMENTS FOR WHICH SINGLE LICENCE IS REQUIRED (IF APPLYINGFOR)						
Name of States in which the establishments are situated	Name of each work	Maximum number of labour will be/is employed	Date of commencement	Permanent establishment or probable date of completion	Maximum number of employees employed/ proposed to be employed	Registration number, if obtained,then details thereof
1	2	3	4	5	6	7

Signature of Contractor
(eSign/DSC)
Note: This is an online application summary applied on Shram Suvidha Portal.
APPLICATION FOR RENEWAL OF LICENCE
1. Licence No. Date :
2. LIN & PAN
2. Name and address of the establishment:
3. Date of expiry of previous licence :
4. Whether the licence of the employer/contractor was suspended or revoked:
5. Details of Fees paid : (Enclose e-payment receipt): Amount …. date of payment :
E-sign /digital sign of the employer/contractor date:

APPLICATION FOR AMENDMENT OF LICENCE :
1. Licence No Date:
2. LIN & PAN
3. Name and address of the establishment:
4.Details for which amendment is sought :
(a). Maximum number of worker presently employed : (If there is increase in the maximum number of workers to be employed, then additional fees/security deposit as per law needs to be deposited:
(b). Details of fees paid through e payment date on which made :
©. Other details requiring amendment in the licence issued (Necessary documents may be uploaded in support of change required)

E-sign /digital sign of the employer/contractor date of application.

FORM-XIV

(Under Rule-73)

PROFORMA OF LICENSE

Licence No. ---------- Reg. No. ---------- Date of Reg. ----------

Licence is hereby granted to .....

for the premises known as .....

situated at .....

for use as a establishment within the limits stated herein after, subject to provisions of the Occupational Safety,Healthand Working Conditions Code, 2020, and the rules made there under.

The ---------- 20.. Issuing Authority

Sl.No.	Period of issue	Valid For Maximum number of Contract labour /workers on any one day	Fee	Date of Payment	Excess fee for late payment	Date of payment	Signature of the Issuing Authority

AMENDMENTS:

Year when Amended	Maximum number of Contract labour /workers on any one day	Date of payment of amendment fee	Date of Payment	Signature of the Issuing Authority

FORM-XV

EXPERIENCE CERTIFICATE OF CONTRACT EMPLOYEE

To whom so ever concerned
1. Name of contractor/employer*:
2. LIN/PAN No. of the contractor/employer *:
3. Email Id of the contractor /employer *:
4. Mobile No. of the contractor/employer *:
5. Nature and location of work:
6. Name of Principal Employer*:
7. LIN/PAN No. of the Principal Employer :*
8. Email Id of the Principal Employer : *
9. Mobile No. of the Principal Employer :*
10. Name of the worker*:
11. UAN / Aadhaar No.:
12. Mobile No. :
13. Serial Number in the Employee Register :
14. Registration number, date and name of the Board if the building and other construction worker is registered as abeneficiary:
15. Period of Employment:
16. Designation:
Seal and Signature of Contractor
*Please strike off whichever is not applicable.

FORM-XVI

(Under Rule-88)

Agreement between Producer and Audio-visual worker

This agreement is made on this day ..... month .....year..... between Messers.....having office at ..... (hereinafter referred to as the —Producer) on the first part and Shri/Smt/Kum .....son/daughter/wife of Shri ..... residing at ..... (hereinafter referred to as the -audio-visual worker) on the second part. The terms Producer' and audio-visual worker' shall include their heirs, successors, administrators and legal representatives:

Now, therefore this agreement is made as follows:

1. That both the parties agree that the duration of this agreement shall be from the date hereof till the completion of the audio-visual and this period shall not exceed consecutive months.

2. That the audio-visual worker agrees to attend studio, location or work place, as the case may be, subject to the requirement of his previous engagement and on his confirmation, to his respective job punctually as and when he shall be required by a written intimation by the Producer or the person duly authorised by him in writing.

3. That inconsideration of the audio-visual worker services, as aforesaid, the Producer agrees to pay and the audio-visual worker agrees to receive a sum of Rs. .....(Rupees .....) payable as advance on signing of this agreement and the balance of Rs. .....payable in .....equal installments.

4. That in the event of the audio-visual production being not complete within the stipulated period and the Producer still needing the services of the audio-visual worker to complete the audio-visual production, the producer agrees to pay and the audio-visual worker agrees to receive additional remuneration on pro-rata basis, payable in the same manner as stated in clause 3 above, till the completion of the production.

5. That in case the assignment of the audio-visual worker is completed earlier than the period stipulated in Clauses 1 and 4 above, the producer shall settle the account of the audio-visual worker and pay the remaining balance of the agreement amount in full before the commencement of re-recording work/censor of the production, whichever is earlier.

6. That the audio-visual worker shall, if so required,

(a) attend the studios, location or work-place, as the case may be, earlier than the a scheduled time of the shift, for preparatory work, and in that case, he/she shall be paid by the Producer extra wages at the rate of Rs.....per hour or part thereof for such early attendance.

(b) continue to work beyond the working day, with one hour break and in that case, he/she shall be paid by the Producer extra wages at the rate of Rs ..... for the work during the extended hours and refreshments, and transport facilities.

8. That the Producer shall provide transport and food or pay traveling allowances to and fro to report to duty and food allowance while on duty as are customary or fixed by bilateral arrangements between the Producer‘s and audio-visual worker‘s representative organizations.

9. That the Producer shall also pay for all travelling and accommodation expenses, fares, cost of food and such other allowances as are customary when the audio-visual worker is required to work on location outdoors.

10. That the Producer shall get the audio-visual worker insured for any injury or damage to his/her person including death caused by accident arising out of or in the course of his/her employment and/or during the period of his/her assignment under this agreement.

11. That where the Producer is prevented from proceeding with the production of the audio-visual by reason of fire, riot, natural calamity, order of the public authority or any other reason beyond his control :-

(a) he shall be entitled to suspend the operation of this agreement during the period of suspension of production in case the production is suspended. The producer shall serve notice in writing of such suspension on the audio-visual worker and shall pay all his/her dues up to the date of service of such notice. Upon resumption of work on the film, this agreement shall revive and shall remain valid for the period stipulated in Clause I excluding the period of suspension therefrom ; or

(b) he shall be entitled to terminate this agreement as from the cessation of production, in case the production ceases completely. The producer shall serve a notice in writing of such cessation on the audio-visual worker and make payment of all the amount due to the audio-visual worker at the time of termination.

12. That in case if the Producer desires to terminate this agreement before the expiry of its term for reasons other than misconduct in relation to performance of the audio-visual worker‘s duties or of his/her unwillingness to perform the services required under this agreement, the producer shall be entitled to do so only upon payment of the balance of the stipulated amount of the agreement. Only after such payment to the audio-visual worker, the Producer shall be titled to employ another audio-visual worker in his/her place.

13. That the Producer shall have the right to terminate this agreement on ground of misconduct on the part of the audio-visual worker in relation to performance of his/her duties or his/her unwillingness to perform the service required under the agreement, upon payment to the audio-visual worker of the amount due at the time of termination, calculated taking into consideration the audio-visual worker‘s total work in the audio-visual and the work he/she has completed till the date of termination of this agreement. Termination under this clause shall not be made unless the charges of the Producer against the audio-visual worker are proved before a forum comprising equal number of representatives of the Producers‘ Organisation and the audio-visual worker‘s Organisation to which the Producer and the audio-visual worker respectively may belong. The decision of the forum shall be binding on both the parties. The producer can engage another audio-visual worker for the job towards this agreement only after the forum has given a decision in favour of such termination and the audio-visual worker has been paid all his dues.

14. That in case of premature termination of this agreement, it shall be the option of the Producer whether or not to retain the work of the audio-visual worker in the audio-visual and at the same time, it shall be option of the audio-visual worker whether or not to allow his/her name to go on the credit titles of the film.

15. That the Producer shall have the right to decide the manner of representing the audio-visual worker‘s personality on the screen, his/her clothes, make-up and hair-style and the audio-visual worker shall fully and willingly comply with the direction of the Producer in this regard, provided that the requirements of the Producer in this respect have been notified to the audio-visual worker and accepted by him/her.

16. That the audio-visual worker agrees that he/she shall render his/her services to the best of his/her ability in such manner as the Producer or, at his instance, the Director of the audio-visual may direct and shall comply with all reasonable instructions that he may give for the production of the film.

17. That the Producer shall also pay for all traveling and accommodation expenses, fares, cost of food and such other allowances as are customary when the audio-visual worker is required to work on location outdoors.

18. That the Producer shall get the audio-visual worker insured for any injury or damage to his/her person including death caused by accident arising out of or in the course of his/her employment and/or during the period of his/her assignment under this agreement.

19. That where the Producer is prevented from proceeding with the production of the audio-visual by reason of fire, riot, natural calamity, order of the public authority or any other reason beyond his control :-

(a) he shall be entitled to suspend the operation of this agreement during the period of suspension of production in case the production is suspended. The producer shall serve notice in writing of such suspension on the audio-visual worker and shall pay all his/her dues up to the date of service of such notice. Upon resumption of work on the film, this agreement shall revive and shall remain valid for the period stipulated in Clause I excluding the period of suspension there from ; or

(b) he shall be entitled to terminate this agreement as form the cessation of production, in case the production ceases completely. The producer shall serve a notice in writing of such cessation on the audio-visual worker and make payment of all the amount due to the audio-visual worker at the time of termination.

20. That in case if the Producer desires to terminate this agreement before the expiry of its term for reasons other than misconduct in relation to performance of the audio-visual worker‘s duties or of his/her unwillingness to perform the services required under this agreement the producer shall be entitled to do so only upon payment of the balance of the stipulated amount of the agreement. Only after such payment to the audio-visual worker, the Producer shall been titled to employ another audio-visual worker in his/her place.

21. That the Producer shall have the right to terminate this agreement on ground of misconduct on the part of the audio-visual worker in relation to performance of his/her duties or his/her unwillingness to perform the service required under the agreement, upon payment to the audio-visual worker of the amount due at the time of termination, calculated taking into consideration the audio-visual worker‘s total work in the audio-visual and the work he/she has completed till the date of termination of this agreement. Termination under this clause shall not be made unless the charges of the Producer against the audio-visual worker are provide before a forum comprising equal number of representatives of the Producers‘ Organisation and the audio-visual worker‘s Organisation to which the Producer and the audio-visual worker respectively may belong. The decision of the forum shall be binding on both the parties. The producer can engage another audio-visual worker for the job towards this agreement only after the forum has given a decision in favor of such termination and the audio-visual worker has been paid all his dues.

22. That in case of premature termination of this agreement, it shall be the option of the Producer whether or not to retain the work of the audio-visual worker in the audio-visual and at the same time, it shall be option of the audio-visual workers whether or not to allow his/her name to go on the credit titles of the film.

23. That the Producer shall have the right to decide the manner of representing the audio-visual worker‘s personality on the screen, his/her clothes, make-up and hair-style and the audio-visual worker shall fully and willingly comply with the direction of the Producer in this regard, provided that the requirements of the Producer in this respect have been notified to the audio-visual worker and accepted by him/her.

24. That the audio-visual worker agrees that he/she shall render his/her services to the best of his/her ability in such manner as the Producer or, at his instance, the Director of the audio-visual may direct and shall comply with all reasonable instructions that he may give for the production of the film.

25. That the audio-visual worker shall comply with all the regulations of the studio, location or work place as the case may be.

26. That the Producer shall not without the consent in writing of the audio-visual worker, assign or transfer the benefitof this agreement to any other person.

27. That the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952 shall beapplicable to this agreement.

28. That the Producer shall not utilise the work of the audio-visual worker in any film, other than the audio-visualunder this agreement, without prior permission of the audio-visual worker.

The parties have put their hands to this agreement on the date, month and year said above in the presence of each otherand in the presence of the witnesses.

Producer Name Address

Audio- Visual workerName Address

Witness 1:

Witness-2:

FORM NO. FL

Licence to work a Factory

1. Licence Number	
2. Registration Number	
3. Full name of Factory	
4. Full Address/location of factory	
5. Full postal address for communicationsrelating to the factory	
6. Maximum horse power installed regular / standby	
7. Maximum number of workers to be employed	
8. Full name, father's name, age & residentialaddress of the occupier and his position in the company/firm/Government factory / local fund factory	

Licence is hereby granted to the factory at 3 above for the premises stated at 4 above for use as a factory within the limits stated in 6, and 7 above subject to the provisions of the Factories Act, 1948 and the Rules made thereunder.

This licence shall be valid until it has been duly cancelled.

Date Licensing Authority

FORM : CF

Certificate of Fitness

	Photo
1. Name & Address of the Factory 2. Serial No. 3. Name 4. Father's Name 5. Sex 6. Residence 7. Date of Birth / or certified age 8. Physical Fitness 9. Descriptive marks 10. If already employed, Nature of work 11. Raw materials or by products handled 12. Date of employment on present work 13. Result of last Medical Examination, if any: 14. Result of present Medical Examination/ Symptoms and signs observed. 15. If suspended from work, state period of suspension with detailed reasons 16. If recertified, fit to resume duty on 17. If Certificate of unfitness or suspension issued to worker	

18. Date of leaving or transfer with reasons for discharge or transfer 19. Certificate extended up to 20. He is advised following further examination/treatment	
21. I hereby certify that I have personally examined ..... S/D/W of..... residing at ..... who is desirous of being employed in a factory and that his/her age as nearly as can be ascertained from my examination, is.....years and he/she is fit for employment in factory as an adult/child in Mfg /handling process viz ..... His/her descriptive marks ..... Signature of Health Surveillance Officer / Medical Officer Signature/Thumb Impression of worker.	
22. Reasons for 1. Refusal of certificate 2. Certificate being revoked Place: Date:	Signature of Health Surveillance Officer / Medical Officer

FORM: HR

Sl. No	Dept./Works	Name Of worker	Age at last birthday	Date of employmentin present work	Date of leaving or transfer with reasons for dischargeor transfer	Nature of job or occupation	Raw materialsor by-products handled	Date of weekly examinationwith results (fit /unfit)	Nature of symptoms	Signature of registered medical practitioner

FORM NO: EDE

Test Report Dust Extraction system

1. Description of system. 2. Hood- (a) Serial No. Hood. (b) Contamination captured (c) Capture velocities (at points to be specified), Design value Actual value. (d) Volume exhausted at Hood. (e) Hood static pressure. 3 . Total pressure drop at (a) Joints (b) Other points of the system (to be specified). 4. Transport velocity in ducts-(at points along ducts to be specified) 5. Air Cleaning Device- (a) Type used (b) Velocity at inlet (c) Static pressure at inlet (d) Velocity at outlet (e) Static pressure at outlet 6. Fan- (a) Type used (b) Volume handled (c) Static pressure (d) Pressure drop at outlet of fan 7. Fan Motor- (a) Type (b) Speed and Horse power 8. Particulars of defects, if any disclosed during test in any of the above components.	

I certify that, on this ..... day ..... of .....the above dust extraction system was

thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination. I further certify that on the said date, I thoroughly examined the above dust extraction system including its components and fittings and that the above is the true report of my examination.

Signature .....

Qualification .....

Address .....

Date .....

(If employed by a Company or Association, give name and address.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

G. ANANTHA RAMU,
SPECIAL CHIEF SECRETARY TO GOVERNMENT (FAC)

To

The Commissioner of Printing, Stationary and Stores purchases, Andhra Pradesh, Vijayawada. {with a request to publish the Notification in the A.P. State Gazette and furnish 10 copies to Government and 50 copies to the Special Commissioner of Labour, Andhra Pradesh, Vijayawada}.

The Special Commissioner of Labour, Andhra Pradesh, Vijayawada.

Copy to:

The Under Secretary to the Government of India, Ministry of Labour & Employment, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.

The Additional Secretary to Chief Minister

The P.S. to Minister (LFB&IMS)

The Law (B) Department

SC

// FORWARDED :: BY ORDER //

K. Gopi Krishna.

SECTION OFFICER